United States
Department of
Agriculture

Economic
Research
Service

DS-388

March 1982

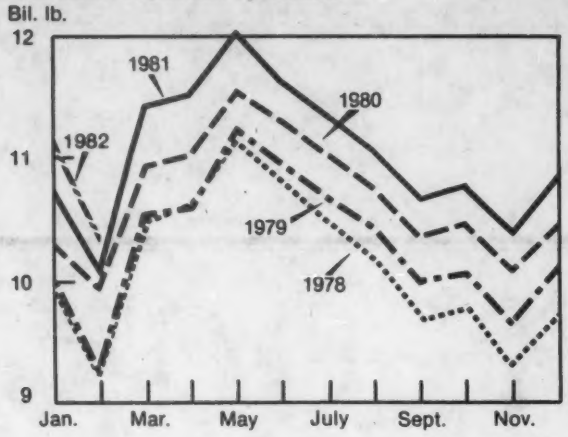
Dairy

OUTLOOK & SITUATION

NOTICE

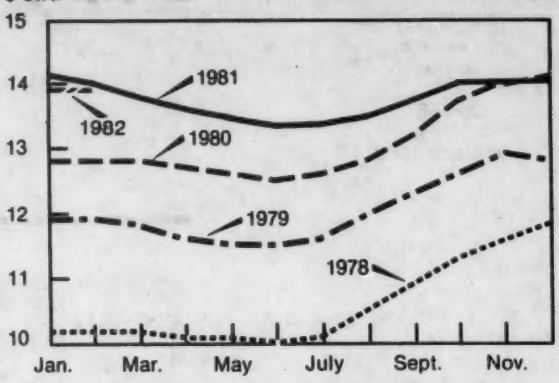
Effective May 1, the Economic Research Service will discontinue free general distribution of publications, including Outlook and Situation reports. Funds must be redirected to maintain basic research and analysis programs. Except for members of the news media, land grant universities, and certain other information outlets, future issues in this series will be available on a paid subscription basis through the Superintendent of Documents, Government Printing Office, Washington, D.C. To order ERS releases, please fill out the subscription form on the inside back cover.

U.S. Milk Production by Months



Neg. ERS 5498-82(3)

Milk Prices*

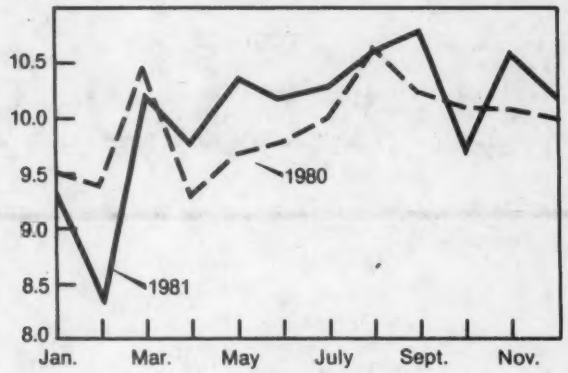


*U.S. average price received by farmers for deliveries to plants and dealers.

USDA

Neg. ERS 5449-82(3)

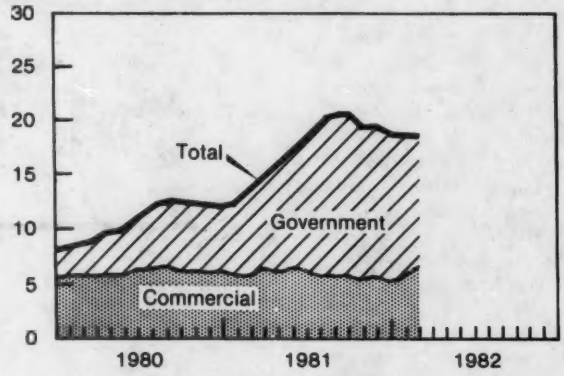
Commercial Disappearance of Milk in All Products*



*Milk equivalent.

Neg. ERS 2075-82(3)

Dairy Products Stocks°

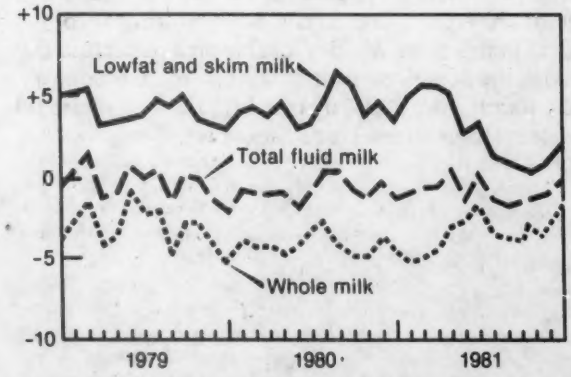


°As of first of month. *Milk equivalent, fat-solids basis.

USDA

Neg. ERS 8448-82(3)

Daily Average Sales of Fluid Milk Items

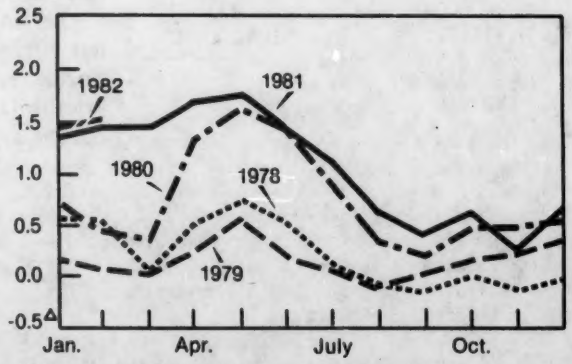


*From year earlier. Adjusted for calendar composition.

USDA

Neg. ERS 2705-82(3)

USDA Dairy Product Purchases*



*Net removals, milk equivalent, fat-solids basis.
△Negative figures denote domestic sales exceeded purchases.

USDA

Neg. ERS 8449-82(3)

In This Issue

	Page
Production	5
Record-Long Expansion Ongoing	5
1981 Milk Production in Review	5
January Inventory Large	7
Feed Prices Unchanged	7
Production Expansion To Continue	9
Fewer But Larger Dairy Farmers—The Trends Continue	9
Price and Income	9
Farm Bill Enacted	9
Farm Price Gains Ended	10
Cash Receipts in 1981—$18.8 Billion	11
Dairy Product Prices Languid	11
Utilization	12
Production of Manufactured Products Higher	12
Gains in Commercial Use Continue	12
Per Capita Use Down in 1981	13
USDA Purchases Larger	13
Federal Order Summary	18
Number of Producers Continues To Increase	18
New Order Added	21
Foreign Trade and Trends	21
Imports and Exports Larger	21
Casein Decision	21
World Output and Use	21
Special Article:	
Cost and Margins for Fluid Whole Milk and Butter	23

The *Dairy Situation* is scheduled to be published in March, June, September, and December during 1982.

Approved by
The World Agricultural
Outlook Board
and Summary released
March 18, 1982

Principal Contributor
Clifford M. Carman
(202) 447-8636

Statistical Assistant
LaVerne T. Williams
(202) 447-8636

National Economics Division
Economic Research Service
U.S. Department of Agriculture
Washington, D.C. 20250

Summary

Milk production this winter has continued above year-earlier levels, with February marking the 34th consecutive month of a year-over-year increase. The almost 2-percent rise in February was the result of 123,000 more cows and 6 pounds more milk per cow. Production will likely continue to expand during the rest of 1982, and total output may be up 1.5 to 3.5 percent from 1981's record 132.6 billion pounds.

The larger output, along with little change in support prices, will likely hold farm and wholesale prices near year-earlier levels. Retail prices may increase 2 to 4 percent—the result of higher marketing costs—and the relatively small price gains should improve commercial disappearance by 1 to 2 percent. However, with production likely to exceed disappearance, USDA purchases for the current marketing year may be between 11 and 16 billion pounds, milk equivalent, compared with last year's 12.7 billion.

Output rose approximately 3 percent during 1981—again for the same reasons as the February 1982 gain. Milk output per cow increased an average 2 percent, while the annual average number of milk cows on farms expanded 1 percent. On January 1, 1982, milk cows on farms numbered 11 million, up 99,000 from July 1, 1981,

and 138,000 from a year earlier. Dairy heifers held for herd replacements also increased from year-ago levels and were the largest inventory since 1965. The number of heifers per 100 cows on January 1 was the highest ratio for that date—41.2.

Since mid-fall, prices for major feed ingredients have been stable but substantially below a year earlier because of excellent harvests. So, even with no increase in milk prices, milk-feed price relationships favor concentrate feeding. In addition, the improved genetics of the dairy herd is heightening the effect of heavy concentrate feeding. As a result, ouput per cow will increase this year. Also, because of limited income alternatives (both off the farm and from other farm enterprises), culling will remain low relative to replacements. Thus, milk cows numbers are expected to remain above a year earlier during 1982.

During 1981, the total number of farms with milk cows continued to decline. There were 12,000 fewer than in 1980, but the size of remaining operations had increased. Dairy farms with 50 or more cows accounted for almost 22 percent of all these operations, compared with about 20 percent in 1980.

The Agriculture and Food Act of 1981 has several provisions dealing with dairy, including price support. The provision covering price support reflects major changes in the minimum level of support and its determination. From December 22 until the end of the marketing year, the support price will be $13.10 per cwt for milk with 3.67 percent fat ($12.80 at 3.5 percent). For 1982/83, the law sets the minimum at $13.25, with provisions for higher support. However, because net support purchases are expected to be substantially more than 4 billion pounds, milk equivalent, and costs will be over $1 billion next year, only the minimum is likely this fall.

USDA held a public dairy symposium on March 22 and 23. The purpose of the symposium was to gather input for drafting recommendations to Congress about changes in the support program. In announcing the symposium, the Secretary said, "Even with the program revisions made within the past year, production is up, demand is flat, and the taxpayer is forced to buy the difference. This is embarrassing, unacceptable, and intolerable. It cannot continue."

The national average farm price for all milk was $14 per cwt in December, 10 cents below a year earlier. That was the first time since August 1977 that the price has been below the previous year. January and February prices were also down from a year earlier. In 1982, the average price for all milk will likely be little changed from 1981's $13.75. First-half prices may average slightly below a year earlier, because ample production is expected. However, second-half prices may be somewhat higher, with the third quarter about even with April-June 1981 and the fourth quarter up 1 to 2 percent from a year earlier. A 15-cent higher support price and some possible adjustment in production would bring this about.

Large supplies and no change in Commodity Credit Corporation (CCC) purchase prices have limited price gains for dairy products. In February, the Bureau of Labor Statistics (BLS) index of wholesale dairy prices stood at 248 (1967=100), up about 1 percent from a year earlier. For all of 1981, the wholesale index was up 6.5 percent, compared with a 9-percent jump in 1980. Wholesale dairy prices are expected to remain near present levels until late summer and then may move somewhat higher because of an improving general economy, a small increase in CCC purchase prices, and a better supply-demand balance near yearend.

Similar to wholesale prices, those in retail markets have been languid. In January, the BLS index for retail dairy prices was up slightly more than 2 percent from a year earlier, the smallest increase since mid-1975. For 1981, the retail index rose around 7 percent. During 1982, retail dairy prices are expected to reflect stagnant wholesale prices, but may increase some because of higher marketing costs.

Production of manufactured dairy products in 1981, on a milk-equivalent, fat solids basis, was estimated at 78.7 billion pounds, up about 6 percent from a year earlier. Manufactured dairy products are expected to increase 4 to 8 percent in 1982. Commercial disappearance of milk and dairy products was up 1 percent in 1981 and should climb 1 to 2 percent in 1982.

For fiscal 1981, USDA net removals were equivalent to 12.7 billion pounds of milk, compared with 8.2 billion a year earlier—an increase of over 50 percent. For fiscal 1982, net removals are forecast between 11 and 16 billion pounds.

Dairy Situation

PRODUCTION

Record-Long Expansion Ongoing

Milk production continued above year-earlier levels in January and February, with February as the 34th consecutive month of year-over-year increases. This exceeds by 6 months the previous record-long expansion phase, which ended January 1978.

The January gain of 2.4 percent was the result of 145,000 more milk cows and an 11-pound increase in output per cow. Likewise, the February gain of 1.8 percent was the result of 123,000 more cows and a 6-pound increase in output per cow. The very modest increases in output per cow during January-February partly may have been the result of below-average quality hay in Minnesota and Wisconsin and heavy culling of older cows.

Of the 33 reporting States, milk production during February was equal to or less than year-earlier levels in 11. For the 5 major milk-producing States, February output was up 4.5, 4.3, and 3.4 percent in California, Pennsylvania, and Minnesota, respectively, while New York was nearly unchanged (up 0.4 percent), and Wisconsin was down 2.2 percent. Milk production during February was up in 8 of 10 farm production regions, led by a gain of a tenth in the Mountain region. The Southern Plains region was unchanged, while Appalachia was down 0.2 percent. The Pacific led the primary production regions with a gain of 4.3 percent, while output was up 2, 1.3, and 0.2 percent in the Northeast, Corn Belt, and Lake States, respectively.

1981 Milk Production in Review

Total 1981 milk production was 132.6 billion pounds, a gain of 4.1 billion pounds (3.2 percent) from the 1980 record (table 1). Both a gain in output per cow and an increase in cow numbers were the basis for the expansion. Each month of 1981 posted substantial year-over-year gains in production, ranging from 2 percent in June to 5 percent in March (table 2). Milk production was record-large for each month of 1981, except May, June, and July.

Milk output per cow expanded an average of 2.2 percent in 1981, compared with the previous year's increase of 3.5 percent. The gains from a year earlier for each month ranged from 1 percent in June to 4 percent in March. Several factors may account for the somewhat slower, but still substantial, gains in output per cow. On the plus side for gains was the fact that the large number of replacement heifers that came into production during 1979 and 1980 were at or approaching their full productivity in 1981. In addition, good-to-excellent weather and pasture conditions, except for the Southeast, promoted higher output per cow. Meanwhile, on the moderating side, was the very large number of replacements that probably entered the herd in 1981. Also, despite favorable milk-fed price relationships, concentrate feeding, at 15.5 pounds per cow per day, was only slightly higher than a year-earlier.

The annual average number of milk cows on farms increased 1 percent in 1981, following a gain of 0.6 percent in 1980. This was the first consecutive 2-year expansion in average cow numbers since 1943-44. The U.S. dairy herd in general had been growing from month-earlier levels since June 1979 and continued to do so in 1981—counter to the pattern of declines that had existed since 1954. The change from a decline to an increase was predominately because of a large number of replacements entering the herd. Replacement numbers were large because of the relatively high number of dairy calves retained since late 1977, reflecting farmers' expectations of future income-earning potential.

Milk output increases occurred in all 10 farm production regions last year, ranging from 9 percent in the

Table 1--Milk cow numbers, milk per cow, and changes by production regions, 1980

Production regions	Milk cow numbers[1]	Milk per cow	1980 Change from year earlier: Milk cow numbers[1]	Milk per cow	Milk production
	1,000 hd	*Pounds*		*Percent*	
Northeast	2,176	12,326	+0.4	+2.2	+2.6
Lake States	3,104	12,200	+1.0	+1.6	+2.7
Corn Belt	1,450	11,342	+0.6	+2.3	+2.8
Northern Plains	498	11,078	+0.4	+4.6	+5.0
Appalachian	798	10,764	0	+2.1	+2.1
Southeast	430	10,726	−0.7	+2.2	+1.5
Delta States	286	9,199	−2.4	+4.7	+2.2
Southern Plains	434	11,094	+1.4	+.3	+1.7
Mountain	507	13,206	+5.8	+3.2	+9.1
Pacific	1,225	15,087	+2.8	+1.7	+4.5
United States[2]	[3]10,921	[3]12,145	+1.0	+2.2	+3.2

[1]Average number during the year. [2]Includes Alaska and Hawaii. [3]May not add to totals due to rounding.

Table 2--Milk production, milk per cow, and milk cows on farms, by months, 1978-81, with comparisons

Item	1978	1979	1980	1981 1/	Change from year earlier: 1979	1980	1981
	Million pounds				Percent		
Milk production 2/							
January	9,958	9,960	10,320	10,786	+0.0	+3.6	+4.5
February	9,242	9,281	9,972	10,129	+0.4	+7.4	+1.6
March	10,491	10,534	10,945	11,511	+0.4	+3.9	+5.2
April	10,610	10,603	11,024	11,509	-0.1	+4.0	+4.4
May	11,151	11,243	11,697	12,055	+0.8	+4.0	+3.1
June	10,817	10,948	11,335	11,576	+1.2	+3.5	+2.1
July	10,503	10,683	11,075	11,344	+1.7	+3.7	+2.4
August	10,182	10,409	10,794	11,104	+2.2	+3.7	+2.9
September	9,683	9,987	10,353	10,638	+3.1	+3.7	+2.8
October	9,780	10,063	10,461	10,751	+2.9	+4.0	+2.8
November	9,320	9,623	10,055	10,384	+3.3	+4.5	+3.3
December	9,724	10,077	10,494	10,847	+3.6	+4.1	+3.4
Total 3/	121,461	123,411	128,525	132,634	+1.6	+4.1	+3.2
	Pounds				Percent		
Milk per cow 2/							
January	915	923	958	992	+0.9	+3.8	+3.5
February	851	862	926	931	+1.3	+7.4	+0.5
March	968	981	1,016	1,058	+1.3	+3.6	+4.1
April	982	989	1,023	1,057	+0.7	+3.4	+3.3
May	1,034	1,049	1,084	1,107	+1.5	+3.3	+2.1
June	1,005	1,023	1,050	1,062	+1.8	+2.6	+1.1
July	975	997	1,025	1,041	+2.3	+2.8	+1.6
August	945	971	997	1,016	+2.8	+2.7	+1.9
September	897	929	955	972	+3.6	+2.8	+1.8
October	906	936	964	981	+3.3	+3.0	+1.8
November	864	895	926	946	+3.6	+3.5	+2.2
December	901	935	966	986	+3.8	+3.3	+2.1
Total 3/	11,243	11,488	11,889	12,147	+2.2	+3.5	+2.2
	Thousands				Percent		
Milk cows on farms 4/							
January	10,887	10,792	10,769	10,870	-0.9	-0.2	+0.9
February	10,860	10,763	10,773	10,880	-0.9	+0.1	+1.0
March	10,834	10,742	10,774	10,880	-0.8	+0.3	+1.0
April	10,801	10,721	10,775	10,885	-0.7	+0.5	+1.0
May	10,783	10,717	10,789	10,894	-0.6	+0.7	+1.0
June	10,768	10,706	10,794	10,897	-0.6	+0.8	+1.0
July	10,768	10,710	10,803	10,901	-0.5	+0.9	+0.9
August	10,779	10,722	10,829	10,927	-0.5	+1.0	+0.9
September	10,790	10,751	10,838	10,948	-0.4	+0.8	+1.0
October	10,793	10,754	10,852	10,963	-0.4	+0.9	+1.0
November	10,788	10,755	10,858	10,982	-0.3	+1.0	+1.1
December	10,792	10,772	10,862	10,998	-0.2	+0.8	+1.3
Annual average	10,803	10,743	10,810	10,919	0.6	+0.6	+1.0

1/ Preliminary. 2/ Excludes milk sucked by calves. 3/ May not add due to rounding. 4/ Excludes heifers not yet fresh.

Milk cows and replacements, 1979-82

Date	Milk Cows	Replacement heifers, 500 pounds and over	
		Number	Per 100 cows
	1,000	*Number*	
1978			
January 1	10,896	3,886	35.7
July 1	10,761	3,955	36.8
1979			
January 1	10,790	3,932	36.4
July 1	10,700	4,115	38.4
1980			
January 1	10,779	4,158	38.6
July 1	10,798	4,377	40.5
1981			
January 1	10,860	4,345	40.0
July 1	10,899	4,628	42.5
1982			
January 1	10,998	4,530	41.2

Milk-feed price ratio[1]

Month	1979	1980	1981	1982
		Pounds		
January	1.62	1.54	1.39	1.55
February	1.59	1.57	1.40	1.54
March	1.58	1.55	1.42	
April	1.56	1.55	1.39	
May	1.53	1.53	1.35	
June	1.51	1.50	1.36	
July	1.43	1.47	1.40	
August	1.51	1.42	1.43	
September	1.54	1.39	1.48	
October	1.55	1.42	1.53	
November	1.59	1.40	1.58	
December	1.54	1.38	1.55	
Average	1.54	1.47	1.44	

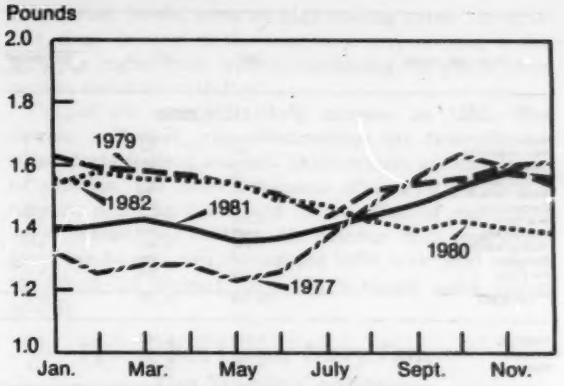
[1]Pounds of 16% protein ration equal in value to 1 pound of milk.

Mountain area to 1 percent in the Southeast. The pattern of production increases closely reflected the change in cow numbers—the Mountain region led with an increase in milk cows of almost 6 percent, while the Southeast was down about 1 percent. Production gains in the four primary regions were led by a 4.5-percent expansion in the Pacific, followed by about a 3-percent rise in the Corn Belt, Lake States, and the Northeast. All five of the major milk-producing States increased output last year. Minnesota and Pennsylvania led with a substantial increase of 5.5 percent, followed by California, also with a strong gain of nearly 5 percent (table 3). Wisconsin and New York were up a modest 1.5 and 1.1 percent, respectively. Production in 1981 declined relative to 1980 in only six States.

January Inventory Large

Milk cows on farms on January 1, 1982, numbered 11 million, up 99,000 from July 1, 1981, 138,000 (1.3 percent) more than a year earlier, and 219,000 (2 percent) larger than 2 years earlier. Dairy heifers (500 pounds and over) held for herd replacement also increased from year-ago levels, but were below the July 1, 1981, inventory. The 4.53 million heifers for possible replacements were the largest stock for the beginnning of a year since 1965. There were 41.2 heifers per 100 cows in the U.S. dairy herd, the highest ratio on record for that date.

Milk-Feed Price Ratio*



*Pounds of 16% protein ration equal in value to one pound of milk sold to plants and dealers.

USDA

Neg. ERS 40-82(3)

Feed Prices Unchanged

Since midfall, feed ingredient prices have been nearly unchanged but substantially below year-earlier levels due to excellent harvests. With unchanged input prices feed costs have been nearly unchanged since midfall, and favorable relative to a year ago. The average price of 16 percent protein dairy rations in mid-February was $180 a ton, up $1 from mid-November, but $21 below last year. The all-milk price in February was 10 cents below November, thus the milk-feed price ratio declined slightly from 1.58 in November to 1.54 for February. The ratio relative to a year earlier has improved 10 percent, entirely because of the 10-percent decline in feed costs.

The 1981 corn crop, at 8.2 billion bushels, was an all-time high, 3 percent more than the 1979 record and 23 percent more than the 1980 drought-reduced outturn. The harvest, when added to the 1-billion-bushel carryover, resulted in a total supply of 9.2 billion bushels, 12 percent larger than last year. Total use is projected to be about unchanged, thus carryover stocks are expected to be more than double year-earlier amounts.

Even though ending stocks are expected at record levels, free stocks of corn are getting tighter because a sizable portion of the inventories are in the farmer-held grain reserve program. The result could be some price strength as 1982 progresses, because farmers participating in the program agree to keep their corn in the reserve for 3 to 5 years or until the U.S. 5-day moving-average market price reaches $3.15 a bushel. Currently, the possibility of price strength is focused on develop-

Table 3--Milk: Production by production regions, 1980 and 1981 with comparisons

State and region	1980	1981 1/	1981 As percent of U.S. total	1981 Change from year earlier
	Million pounds		Percent	
Maine	665	699	0.5	+5.1
New Hampshire	347	344	.3	-.9
Vermont	2,289	2,301	1.7	+.5
Massachusetts	570	578	.4	+1.4
Rhode Island	47	46	2/	-2.1
Connecticut	612	620	.5	+1.3
New York	10,974	11,093	8.4	+1.1
New Jersey	494	494	.4	0
Pennsylvania	8,496	8,965	6.8	+5.5
Delaware	125	124	.1	-.8
Maryland	1,520	1,556	1.2	+2.4
NORTHEAST	26,139	26,820	20.2	+2.6
Michigan	4,970	5,103	3.8	+2.7
Wisconsin	22,380	22,705	17.1	+1.5
Minnesota	9,535	10,061	7.6	+5.5
LAKE STATES	36,885	37,869	28.6	+2.7
Ohio	4,310	4,385	3.3	+1.7
Indiana	2,210	2,282	1.7	+3.3
Illinois	2,540	2,604	2.0	+2.5
Iowa	4,108	4,298	3.2	+4.6
Missouri	2,826	2,877	2.2	+1.8
CORN STATES	15,994	16,446	12.4	+2.8
North Dakota	939	963	.7	+2.6
South Dakota	1,669	1,757	1.3	+5.3
Nebraska	1,315	1,400	1.1	+6.5
Kansas	1,330	1,397	1.1	+5.0
NORTHERN PLAINS	5,253	5,517	4.2	+5.0
Virginia	1,974	2,009	1.5	+1.8
West Virginia	350	350	.3	0
North Carolina	1,631	1,654	1.2	+1.4
Kentucky	2,219	2,281	1.7	+2.8
Tennessee	2,241	2,296	1.7	+2.5
APPALACHIAN	8,415	8,590	6.5	+2.1
South Carolina	541	552	.4	+2.0
Georgia	1,367	1,396	1.1	+2.1
Florida	2,028	2,082	1.6	+2.7
Alabama	610	582	.4	-4.6
SOUTHEAST	4,546	4,612	3.5	+1.5
Mississippi	817	845	.6	+3.4
Arkansas	745	793	.6	+6.4
Louisiana	1,012	993	.7	-1.9
DELTA STATES	2,574	2,631	2.0	+2.2
Oklahoma	1,110	1,150	.9	+3.6
Texas	3,625	3,665	2.8	+1.1
SOUTHERN PLAINS	4,735	4,815	3.6	+1.7
Montana	314	331	.2	+5.4
Idaho	1,947	2,160	1.6	+10.9
Wyoming	132	136	.1	+3.0
Colorado	858	928	.7	+8.2
New Mexico	602	670	.5	+11.3
Arizona	1,031	1,133	.9	+9.9
Utah	1,028	1,110	.8	+8.0
Nevada	219	222	.2	+1.4
MOUNTAIN	6,131	6,690	5.0	+9.1
Washington	2,942	3,017	2.3	+2.5
Oregon	1,169	1,220	.9	+4.4
California	13,577	14,244	10.7	+4.9
PACIFIC	17,688	18,481	13.9	+4.5
Alaska	13	13	2/	0
Hawaii	152	150	.1	-1.3
UNITED STATES	128,525	132,634	100.0	+3.2

1/ Preliminary. 2/ Less than 0.05 percent.

ments in international markets, planting and growing weather, additional use of the reserve, and farmer participation in the acreage reduction program. Prices at the farm are likely to average $2.40 to $2.55 a bushel this season, compared with the record $3.11 in 1980/81. For the first quarter of the marketing year, farm prices averaged $2.39. There has been virtually no change so far in the second quarter. In mid-February, farmers received an average of $2.40, ranging from $2.22 in Minnesota to $2.80 in Georgia and Texas. At Chicago, No. 2 yellow corn was quoted in mid-March at about $2.65 a bushel, about 80 cents below a year earlier.

The 1981 soybean harvest was the second largest on record—13 percent more than the 1980 crop, despite 2 percent less harvested acreage. The soybean harvest, when added to the 318-million-bushel carryover, resulted in a total supply of 2.3 billion, up 9 percent from last year. Use is expected to be up about 9 percent; thus, ending stocks may increase by a tenth. The larger stocks will likely keep the price of soybeans and products below a year earlier until late this year. Soybeans are expected to average about $6.05 a bushel in 1981/82, compared with $7.57 last year, while soybean meal prices at Decatur are forecast at $175 to $195 a ton, down from 1980/81's $218.20. In mid-March, 44 percent meal was quoted around $180 a ton, down about $30 from last year.

Because of favorable growing conditions, forage stocks were rebuilt during 1981. The hay crop was up 8 percent from a year earlier and only 4 percent below the 1979 record, while corn and sorghum silage increased 5 and 31 percent, respectively. With large silage supplies and 9 percent higher hay stocks on January 1, hay prices will likely be below year-earlier levels until late in 1982. Farm prices for baled alfalfa hay averaged $74.70 a ton in mid-February, down about $3 from last year. Prices ranged from $50 in Montana to $110 in Pennsylvania.

Production Expansion To Continue

Milk cow numbers are expected to remain above year-earlier levels for all of 1982 and, for the year, may average about 1 percent above 1981. The January 1 inventory of dairy replacements was more than ample for a normal culling rate. So, the herd can be maintained above year-earlier levels, even at high culling rates. In addition, some farmers in the near term may respond to the lack of a higher milk price by increasing the size of their herd to maintain cash flow.

Utility cow prices, Omaha

Month	1979	1980	1981	1982
		Dollars per cwt.		
January	47.33	47.94	41.61	36.64
February	50.81	51.22	43.65	38.11
March	52.94	48.80	43.12	
April	57.00	45.73	42.93	
May	55.51	42.78	42.39	
June	50.60	44.06	42.88	
July	47.80	43.33	43.78	
August	48.33	45.53	44.31	
September	49.65	46.56	42.47	
October	47.71	45.93	40.60	
November	46.49	43.91	38.71	
December	46.98	42.92	36.65	
Average	50.10	45.73	42.01	

Output per cow will likely increase in 1982. The current milk-feed price relationships are favorable for concentrate feeding and will likely remain advantageous. In addition, the output response of today's genetically superior dairy herd will add to the effect of continuing heavy concentrate feeding. On balance, milk production gains can be expected throughout 1982, with total output up 1.5 to 3.5 percent from 1981's record 132.6 billion pounds.

Fewer But Larger Dairy Farms—The Trends Continue

The total number of operations with milk cows (323,750) declined by about 12,000 in 1981. This 3.6-percent drop continues the slowing of the rate of decline. For example, the number of operations fell about 6 percent in 1978, 5 percent in 1979, and 4 percent in 1980. As was the case in past years, Wisconsin and Minnesota had the largest number of dairy operations last year—44,000 and 26,000, respectively. The decline in operations in the 5 major milk-producing States was relatively small—3 percent (3,500), compared with the percentage decline for all the United States.

Also, the trend toward larger dairy farms in relation to the total number continued during 1981. Dairy farms with 50 or more cows accounted for almost 22 percent of all operations in 1981, compared with about 20 percent in 1980 and less than 19 percent in 1979. In 1980, herds of 50 or more cows held around 64 percent of the inventory, but their share was up to almost 65 percent in 1981. Meanwhile, farms with herds of 100 cows or more were 5.7 percent of the operations in 1981 but held over a third of the inventory. In contrast, the farms with less than 30 cows were over half of the total operations but held only about an eighth of the inventory.

As has been the case previously, California had the largest share of operations with herds of 100 cows or more—about 32 percent in 1981. Eight other States reported that 10 percent or more of their dairy operations had herd sizes of 100 or more cows, compared with seven States in 1980 and four in 1979. In 1982, the trend of fewer but larger dairy operations is expected to continue.

PRICES AND INCOME

Farm Bill Enacted

In mid-December, Congress passed new farm legislation, the Agriculture and Food Act of 1981. And on December 22, 1981, the President signed the Act into law. The law is an omnibus piece of legislation containing 18 titles, with dairy included as Title I.

Within Title I there are seven sections. The first two deal with Federal milk orders. One extends until

December 31, 1985, the seasonal incentive plans (seasonal base plans and Louisville plans) and the provision requiring a hearing to amend an order if one third or more of the producers petition for a hearing. This section does not expand the authority for Class I base plans. The authority for the one in effect (Puget Sound) will expire on December 31, 1984. The other section on Federal orders leaves the legal status of producer-handlers unchanged. The third section is on milk price support, and its features will be discussed in the following paragraph. The fourth section extended to the end of 1985 the authorization to transfer (donate) dairy products to Veterans hospitals and the military. The fifth continues the dairy indemnity payments program until the end of fiscal 1985 (marketing year 1984/85) but excludes manufacturers from getting payments. Section six directs the Secretary of Agriculture to use all available authorities to the fullest extent practicable to reduce Government stocks of dairy products. The last section requests that a report on Federal dairy programs be prepared and submitted to Congress before January 1, 1983. The report will describe the strengths and weaknesses of existing programs and the possible effects of new programs on minimizing dairy surpluses. The report shall also include regional assessments of the impacts of the current and proposed programs on supply and demand conditions, farm income, and consumer costs.

During consideration of the farm bill, the dairy price support features were subject to numerous proposals and extensive discussion. The provisions contained in the law reflect major changes in the minimum level of support and its determination for each marketing (fiscal) year. For example, the 1977 law set the minimum support level at not less than 80 percent of the parity price, with semiannual adjustments. The 1981 Act establishes minimum dairy price support at amounts that may be below 70 percent of the parity price for the next 3 marketing years. This is the first time since passage of the 1949 Act that supports are not directly tied to parity. In addition, no midyear adjustment is required.

From December 22 until the end of the current marketing year, the law sets minimum price support at $13.10 per cwt for milk with 3.67 percent fat ($12.80 for 3.5 percent). For 1982/83 through 1984/85, the Act sets minimum support at $13.25, $14.00, and $14.60 per cwt, respectively. However, if the net cost of the dairy price support program is projected at less than $1 billion, the price of milk will be supported at not less than 70 percent of parity. In addition, if net support purchases are projected to be less than 4 billion pounds, milk equivalent, for 1982/83, 3.5 billion pounds for 1983/84, and 2.69 billion for 1984/85, the minimum support will be not less than 75 percent of parity.

For the next marketing year, 1982/83, net support purchases are expected to be substantially more than 4 billion pounds, and the net costs of the program will likely be more than $1 billion. Thus, under current law, only the minimum support price of $13.25 per cwt can be expected this fall. The 15-cent increase in support would result in slightly higher purchase prices for butter, cheese, and nonfat dry milk. Assuming an equal split between butter and powder and no change in the manufacturing allowance, the butter purchase price would be raised about 1.5 cents, and nonfat dry milk would go up about a penny. The cheese price would be raised about 1.5 cents, again assuming no change in the manufacturing allowance and a zero recovery value of whey.

Meanwhile, USDA held a public dairy symposium on March 22 and 23 to gather input for drafting recommendations to Congress about changes in the price support program. When announcing the symposium, the Secretary said, "Even with the program revisions made within the past year, production is up, demand is flat, and the taxpayer is forced to buy the difference. This is embarrassing, unacceptable, and intolerable. It cannot continue." The first day of the symposium focused on the supply and demand situation facing the industry over the next 2 years. The next day was devoted to exploring options on how the current dairy situation can be improved.

Farm Price Gains Ended

The national average price received by farmers for all-milk was $14.00 per cwt in December, 10 cents below a year earlier (table 4). This was the first time since August 1977 that the price has been below year-earlier levels. January and February prices were also down from a year earlier. No support price increase since October 1980 and the continued over-supply of milk and dairy products caused the declines.

Since April 1980, the price of manufacturing grade milk after adjustment for fat content has been below the support level because, given the large supply of milk available, manufacturers of dairy products did not have to complete for raw milk to operate their plants efficiently. The January-February average price after adjustment was about 36 cents below support, compared with last year's shortfall of 32 cents. With ample milk production expected for the rest of 1982, manufacturing grade milk prices are expected to be about unchanged. For 1981, the simple average of farm prices for manufacturing grade milk was $12.75 per cwt—6.3 percent more than last year, but about 35 cents below the $13.10 support price.

Minimum Federal order Class I prices averaged $14.69 per cwt in March, up 9 cents from last year's low of $14.60 during November. At the same time, prices negotiated by cooperative associations were stable. The increase in minimum Class I prices, coupled with stable negotiated prices, resulted in the estimated average over-order payment on Class I milk dropping from 76 cents last November to 66 cents in March. The minimum Class I prices in April will average $14.60, down 9 cents from March and 17 cents from a year earlier.

During 1981, the all-milk average price received by farmers (a simple average of monthly prices) rose to $13.75 per cwt, almost 6 percent more than the $13.00 in 1980. In 1982, the all-milk average price is expected to be about unchanged. First-half prices may be slightly

Table 4—Milk prices received by farmers

Month	All sold to plants				Manufacturing grade			
	1979	1980	1981	1982	1979	1980	1981	1872
	Dollars per 100 pounds							
January	11.90	12.80	14.10	13.90	10.90	11.70	13.00	13.00
February	11.90	12.80	14.00	13.90	10.80	11.70	12.90	12.90
March	11.80	12.80	13.80		10.80	11.80	12.90	
April	11.60	12.70	13.60		10.80	11.80	12.70	
May	11.50	12.60	13.50		10.80	11.70	12.70	
June	11.50	12.50	13.40		10.70	11.70	12.50	
July	11.60	12.60	13.40		10.80	11.60	12.40	
August	12.00	12.80	13.40		11.10	11.80	12.40	
September	12.30	13.20	13.80		11.40	12.20	12.60	
October	12.60	13.70	14.00		11.60	12.70	12.90	
November	12.90	14.00	14.00		11.70	12.90	13.00	
December	12.80	14.10	14.00		11.70	13.00	13.00	
Average	12.00	13.00	13.75		11.10	12.00	12.75	

below a year earlier because of no change in the support price and expected ample milk production. Second-half prices may average somewhat above the previous year—with the third quarter about even with last year as the economy improves and the fourth quarter up 1 to 2 percent because of the expected 15-cent higher support price and maybe the beginning of a production adjustment.

Cash Receipts in 1981—$18.8 Billion

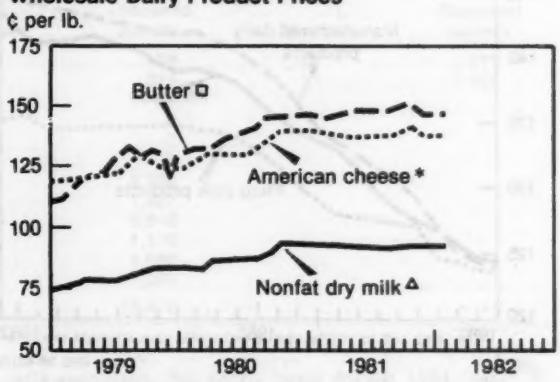
Cash receipts from the sale of milk during November-December 1981 were estimated to have increased only 3 percent, compared with a year-earlier gain of 14 percent. While milk marketings were more than 3 percent larger than last year, prices were down slightly. For the year, total cash receipts were estimated at $18.8 billion, up 9 percent from 1980. During 1982, cash receipts will likely be 1 to 5 percent higher.

Dairy Product Prices Languid

The combination of large supplies relative to use and no change in CCC purchase prices from a year ago acted in concert to limit price gains in the dairy-product wholesale and retail markets. In February, the BLS index for wholesale dairy prices stood at 248 (1967=100), up about 1 percent from a year earlier. For 1981, the index averaged 245.6—an increase of 6.5 percent relative to 1980, compared with a 9-percent increase from 1979 to 1980.

Looking at the products that CCC buys, there has been little change in prices over the past year. For example, in early March, Grade A butter in Chicago was quoted at about $1.47 a pound, up only half a penny from a year earlier. Nonfat dry milk (high heat, Central States area) was about 93 cents a pound, unchanged from last year. Meanwhile, the price of cheddar cheese (Wisconsin assembly points) was below a year earlier—500-pound barrels quoted at $1.31 a pound were 2.5 cents lower, while 40-pound blocks, at $1.37, were down 1.5 cents. Wholesale dairy prices are expected to remain near present levels until late summer and then may move somewhat higher because of an improving economy, a small increase in CCC purchase prices, and a better supply-demand balance near yearend.

Wholesale Dairy Product Prices



□ Grade AA Chicago. * 40-lb. block, Wisconsin assembly points.
△ High-heat, central-states.

USDA Neg. ERS 79-82(3)

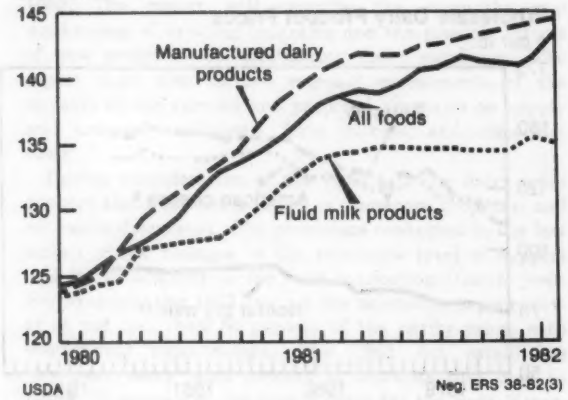
In January, the BLS index for retail dairy prices was 245.8 (1967=100), up 2.4 percent from January 1981 and the smallest gain since mid-1975, when the index dropped. The retail dairy index averaged 243.6 in 1981, an increase of 7.1 percent from a year earlier (table 5). BLS also reported that during January a 1/2-gallon of whole milk increased 3 cents from a year earlier, while a pound of butter was up 2 cents, and a 1/2-gallon of ice cream was 19 cents higher. For all of 1981, a 1/2-gallon of whole milk averaged $1.12, while a pound of butter averaged $1.99—increases of 7 and 11 cents, respectively. Retail dairy prices are expected to reflect stagnant wholesale prices, but they will likely be higher because of increased marketing costs. For the year, the retail index will likely be up 2 to 4 percent.

Table 5—Retail dairy product prices

Item	Unit	Av. 1980	Jan. 1981	Apr. 1981	July 1981	Oct. 1981	Av. 1981	Jan. 1982
All dairy products	1967=100	227.4	240.1	243.5	244.2	244.6	243.6	245.8
Milk, fresh whole, fortified	$/1/2 gal.	1.049	1.104	1.116	1.118	1.124	1.117	1.134
Milk, fresh skim	$/1/2 gal.	.921	.954	.974	.980	.988	.976	.988
Milk, fresh lowfat	$/1/2 gal.	1.019	1.070	1.070	1.058	1.060	1.065	1.072
Butter, salted Grade AA, sticks	$/lb.	1.878	1.992	1.991	1.992	1.997	1.993	2.019
Ice cream, pre-packaged, bulk, regular	$/1/2 gal.	1.823	1.938	2.024	2.024	2.032	2.016	2.128
Yogurt, natural fruit flavored	$/1/2 pt.	.469	.491	.492	.504	.511	.500	N.A.

N.A. = Not available.

Retail Food and Dairy Products Prices
Dec. 1977 = 100



UTILIZATION

Production of Manufactured Products Higher

Based on weekly data, butter output in February was about 6 percent larger than last year. That gain follows January's outturn of 128 million pounds, also up 6 percent. For all of 1981, butter production was 1,237 million pounds, 8 percent larger than 1980 (table 6). Meanwhile, nonfat dry milk production in January was 13 percent larger than a year earlier, following gains of over a fifth in November and December. During 1981, nonfat dry milk production was up an eighth from 1980. American-type cheese production during January was up about 3 percent, following an outturn of 2,585 million pounds in 1981—9 percent larger than the previous year. Weekly data for February indicate that American cheese production was unchanged from a year earlier. Output of other cheese varieties declined 1.5 percent in January, following an increase of less than 1 percent for all of 1981.

Production of manufactured dairy products on a milk-equivalent, fat solids basis was estimated at 78.7 billion pounds in 1981, up slightly more than 6 percent—4.6 billion pounds. Increased milk production provided about 4.1 billion pounds, while a drop of a half billion in fluid sales (on a fat basis) contributed the rest of the increase. Of the increased milk available for manufacturing, about 4 billion pounds were used to make the products that USDA purchases—butter, 1.9 billion, and American cheese, 2.1 billion. With raw milk supplies likely to keep expanding while fluid sales remain at best unchanged, milk used in manufacturing will increase 4 to 8 percent in 1982. Most of the gain will be in the production of butter-powder and American cheese.

Gains in Commercial Use Continue

Commercial disappearance of milk and dairy products (milk-equivalent, fat solids basis) during October-December was up about 1 percent from a year earlier, following gains of more than 5 percent in the second quarter and nearly 3 percent in the third (table 7). For all of 1981, use—at 120.3 billion pounds—was up 1 percent from 1980 but was unchanged from 1979.

Sales of butter during fourth-quarter 1981 was 3 percent more than a year earlier, with use for the year unchanged from 1980 (table 8). Use of American cheese improved in 1981, rising 3 percent, with gains in the last three quarters overcoming the weak first. Meanwhile, other cheese sales were up only 2 percent, because fourth-quarter use fell more than 3 percent. Sales of fluid milk products in Federal order markets were down 0.8 percent during 1981.

Commercial disappearance of milk and dairy products on a milk-equivalent, fat solids basis is expected to increase in 1982. The gain would result from relatively small increases in retail dairy prices throughout 1982 and a strong second-half recovery of real disposable personal income per capita. Thus, per capita use will likely improve slightly, and when combined with a larger population, a gain of 1 to 2 percent may result.

Table 6—Production of selected manufactured dairy products, annual, 1979-81

Item	1979	1980	1981[1]	Change from year earlier 1980	Change from year earlier 1981
	Million pounds		*Percent*		
Butter	984.6	1,145.3	1,236.8	+16.3	+8.0
Cheese:					
American	2,189.9	2,374.6	2,584.8	+8.4	+8.9
Other	1,527.3	1,608.5	1,619.7	+5.3	+.7
Creamed cottage	839.7	822.6	772.0	−2.0	−6.2
Canned milk	796.1	724.7	751.7	−9.0	+3.7
Dry whole milk	85.3	82.7	92.1	−3.0	+11.4
Ice cream (mil. gal.)	811.1	829.8	831.8	+2.3	+.2
Milk equivalent[2]	68,403	[1]74,085	[3]78,700	+8.3	+6.2
Nonfat dry milk	908.1	1,160.7	1,305.8	+27.8	+12.5

[1]Preliminary. [2]Total all manufactured products. [3]Estimated.

Wisconsin out-of-state milk shipments

Month	1980		1981		1982	
	Loads	Volume	Loads	Volume	Loads	Volume
	Number	*Thousand pounds*	*Number*	*Thousand pounds*	*Number*	*Thousand pounds*
January	156	7,332	4	188	57	2,679
February	70	3,290	7	329	31	1,457
March	20	940	2	94		
April	0	0	0	0		
May	0	0	0	0		
June	0	0	0	0		
July	119	5,593	48	2,256		
August	146	6,862	41	1,927		
September	190	8,930	118	5,546		
October	67	3,149	25	1,175		
November	8	376	40	1,880		
December	6	282	23	1,081		
Total	782	36,754	308	14,476		

[1]Changes in Marketing practices in the Chicago Market and adjacent Federal Order Markets may affect the comparability of this data.

Dairy product stocks

Item	Feb. 1, 1980	Feb. 1, 1981	Feb. 1, 1982
	Million pounds		
Commercial:			
Butter	28.6	41.5	80.2
American cheese	393.1	421.8	377.2
Other cheese	116.0	97.0	85.3
Nonfat dry milk	85.5	81.7	87.7
Milkfat	193.1	204.6	218.4
Solids-not-fat	253.6	248.4	238.7
Milk equivalent	5,456	5,818	6,114
Government:			
Butter	162.4	290.6	352.9
American cheese	6.9	200.8	503.7
Nonfat dry milk	368.8	498.4	820.5
Milkfat	132.9	298.7	446.4
Solids-not-fat	356.9	541.6	944.6
Milk equivalent	3,422	7,987	12,265

Per Capita Use Down in 1981

Civilian per capita domestic disappearance (including USDA donations) decreased by 2 pounds to 540 on a milk-equvalent, fat solids basis during 1981 (table 9). Even through commercial sales of dairy products increased from a year earlier, the larger population, along with slightly reduced USDA donations, brought about the decline in consumption. Estimated per person use of milkfat in 1981 was 19.8 pounds, down from 1980 because of lower whole milk and butter use.

Last year's per capita use of butter was 4.3 pounds, down 4 percent from 1980 (table 10). Total cheese use per person was up 2 percent in 1981, completely due to increased consumption of American cheese. Per capita use of other-than-American cheese was unchanged from a year earlier, the first time in 19 years that this category has not increased.

USDA Purchases Larger

The USDA continued to buy large amounts of dairy products this winter because of surplus milk production. Milk-equivalent purchases totaled 3 billion pounds during January-February, 6 percent more than a year earlier. Butter removals were 112 million pounds during January-February, compared with 101 million a year ear-

Table 7--Commercial disappearance: Total milk, annual and by quarters, 1980-81 1/

Item	1979	1980					1981 2/				
		By quarters				Annual	By quarters				Annual
		1st	2nd	3rd	4th		1st	2nd	3rd.	4th	
		Billion pounds									
Production	123.4	31.2	34.1	32.2	31.0	128.5	32.4	35.1	33.1	32.0	132.6
Farm use	2.5	.6	.6	.6	.6	2.3	.6	.6	.6	.6	2.2
Marketings	120.9	30.6	33.5	31.6	30.4	126.2	31.8	34.5	32.5	31.4	130.4
Beginning commercial stocks	4.5	5.4	5.6	6.3	6.1	5.4	5.8	6.0	5.9	5.2	5.8
Imports	2.3	.4	.4	.5	.9	2.1	.4	.5	.6	.9	2.3
Total supply	127.7	36.4	39.5	38.4	37.4	133.7	38.0	41.0	39.0	37.5	138.5
Ending commercial stocks	5.4	5.6	6.3	6.1	5.8	5.8	6.0	5.9	5.2	5.3	5.3
Net removals	2.1	1.5	4.4	1.5	1.4	8.8	4.3	4.8	2.1	1.6	12.9
Commercial disappearance Actual	120.2	29.3	28.8	30.8	30.2	119.1	27.7	30.3	31.7	30.6	120.3
Percent change 3/	+1.2	+1.8	-4.8	+0.2	-0.5	-0.9	-5.6	+5.6	+2.7	+1.1	+1.0

1/ Milk equivalent, fat solids basis. Totals may not add due to rounding.
2/ Preliminary.
3/ From year earlier using unrounded data.

Table 8--Commercial disappearance: Selected dairy products, United States, annual 1970-81, quarters, 1980-81 1/

Year and quarter	Butter 2/	Cheese		Nonfat dry milk	Canned milk	Frozen products 4/
		American 3/	Other			
	Million pounds					Million gallon
1970	898.2	1,398.0	909.1	983.2	1,213.8	1,097.3
1971	847.1	1,454.8	987.0	981.8	1,186.9	1,102.4
1972	885.4	1,595.7	1,127.8	919.2	1,102.6	1,108.6
1973	855.6	1,677.1	1,210.2	1,110.1	1,056.7	1,118.6
1974	929.9	1,780.6	1,276.5	809.9	999.5	1,128.0
1975	951.0	1,717.1	1,331.9	697.0	923.9	1,183.9
1976	919.0	1,920.9	1,458.0	719.2	899.0	1,154.0
1977	859.8	1,958.8	1,512.3	682.2	775.2	1,167.6
1978	903.5	2,064.7	1,655.5	658.4	776.1	1,173.5
1979	895.0	2,113.1	1,730.4	603.1	773.7	1,152.1
1980	878.8	2,023.9	1,827.9	538.9	732.5	1,166.1
1981	877.8	2,090.8	1,860.0	455.6	744.2	1,166.9
1980 - 1st	250.4	515.2	421.3	159.8	176.9	255.8
2nd	161.3	501.6	424.7	79.4	160.7	320.0
3rd	229.3	471.2	438.3	186.9	170.0	349.6
4th	237.9	535.4	543.8	112.7	225.0	240.7
1981 - 1st	190.0	502.4	433.7	97.4	179.1	251.9
2nd	215.3	518.3	444.8	84.2	158.4	325.6
3rd	227.6	531.3	455.6	159.1	168.5	344.1
4th	244.9	540.0	525.8	114.8	237.9	245.3
	1980-81 percent change					
1st 5/	-23.1	-1.3	+4.0	-38.0	+2.4	-1.5
2nd	+33.5	+3.3	+4.7	+6.0	-1.4	+1.7
3rd	-.7	+12.8	+3.9	-14.9	-.9	-1.6
4th	+2.9	+.9	-3.3	+1.9	+5.7	+1.9

1/ Totals may not add due to rounding. 2/ Imports include butter equivalent of butteroil. 3/ Imports include Colby cheese; stocks do not include processed cheese. 4/ Excludes Mellorine. 5/ On a daily average basis.

Table 9--Factors influencing and indicative of the demand for milk and dairy products, United States, selected years, 1960-81

Year	Total population: July 1 (including Armed Forces overseas)	Total civilian employment	Per capita disposable income: Current R	Per capita disposable income: Deflated by consumer price index 1/ R	Civilian per capita disappearance: Milk equivalent: Fat-solids basis	Civilian per capita disappearance: Milk solids: Milk-fat	Civilian per capita disappearance: Milk solids: Solids-not-fat	Civilian per capita disappearance: Margarine	Retail price indexes: Consumer price	Retail price indexes: All foods	Retail price indexes: Dairy products
	---Million---		---Dollars---		---Pounds---				---1967 = 100---		
1960	180.7	65.8	1,947	2,195	653	24.5	41.4	9.4	88.7	88.0	88.4
1965	194.3	71.1	2,448	2,590	620	22.9	40.6	9.9	94.5	94.4	90.0
1966	196.6	72.9	2,613	2,688	604	22.3	40.3	10.5	97.2	99.1	95.8
1967	198.7	74.4	2,757	2,757	581	21.4	39.5	10.5	100.0	100.0	100.0
1968	200.7	75.9	2,956	2,837	577	21.2	39.7	10.8	104.2	103.6	103.3
1969	202.7	77.9	3,152	2,871	569	20.9	39.5	10.8	109.8	108.9	106.7
1970	205.1	78.7	3,390	2,915	561	20.6	39.7	11.0	116.3	114.9	111.8
1971	207.7	79.4	3,620	2,984	556	20.4	39.7	11.1	121.3	118.4	115.3
1972	209.9	82.2	3,860	3,081	558	20.5	39.4	11.3	125.3	123.5	117.1
1973	211.9	85.1	4,315	3,242	551	20.2	39.5	11.2	133.1	141.4	127.9
1974	213.9	86.8	4,667	3,160	539	19.8	37.9	11.2	147.7	161.7	151.9
1975	216.0	85.8	5,075	3,148	540	19.8	37.5	11.1	161.2	175.4	156.6
1976	218.0	88.8	5,477	3,212	540	19.8	38.2	12.0	170.5	180.8	169.3
1977	220.2	92.0	5,954	3,280	542	19.8	37.7	11.4	181.5	192.2	173.9
1978	222.6	96.0	6,571	3,363	545	20.0	37.3	11.3	195.4	211.4	185.6
1979	225.1	98.8	7,293	3,355	548	20.1	37.2	11.3	217.4	234.5	207.1
1980 2/	227.7	99.3	8,002	3,242	542	19.9	36.6	11.4	246.8	254.6	227.4
1981 2/	229.9	100.4	8,769	3,220	540	3/ 19.8	3/ 36.4	11.4	272.3	274.6	243.6

1/ 1967 dollars.
2/ Preliminary.
3/ Estimated.
R = Revised series.

Table 10--Milk and dairy product sales (domestic disappearance, commercial sources), total and per capita, United States, 1976-81 1/

Year	Fluid milk products sales					Butter	Cheese			Evaporated and condensed	
	Fluid whole milk	Cream 2/	Low-fat milk 3/	Total product weight	Whole milk equivalent 4/		Whole and part skim milk 5/	American	Other	Cottage cheese 6/	Whole milk	Skimmed milk
					Total							
					Million pounds							
1976	37,061	1,189	17,710	55,960	51,502	932	1,912	1,446	1,025	1,046	783	
1977	35,638	1,199	18,988	55,825	51,380	860	1,912	1,493	1,032	915	854	
1978	34,938	1,214	19,813	55,965	51,175	894	2,050	1,627	1,039	885	772	
1979	33,937	1,251	20,647	55,835	51,386	923	2,118	1,702	1,013	896	749	
1980	32,754	1,276	21,743	55,773	50,933	912	2,045	1,801	1,016	840	747	
1981 7/	31,o10	1,325	22,395	55,325	50,525	898	2,157	1,831	980	869	740	
					Per capita 8/							
					Pounds							
1976	172	5.5	82.2	260	239	4.3	8.8	6.6	4.7	4.8	3.6	
1977	164	5.5	87.1	256	236	3.9	8.7	6.8	4.7	4.2	3.9	
1978	159	5.5	89.9	254	232	4.0	9.2	7.3	4.7	4.0	3.5	
1979	152	5.6	92.5	250	230	4.1	9.4	7.6	4.5	4.0	3.3	
1980	145	5.7	96.3	247	226	4.0	9.0	7.9	4.5	3.7	3.3	
1981 7/	139	5.8	98.2	243	222	3.9	9.4	8.0	4.3	3.8	3.2	

Year	Frozen products				Dry products				
	Ice cream	Ice milk	Sherbet	Other	Mello-rine	Whole milk	Nonfat dry milk	Butter-milk	Whey 9/
				Total					
				Million pounds					
1976	3,928	1,574	322	64	112	33	743	38	527
1977	3,887	1,694	324	72	90	34	698	59	530
1978	3,914	1,705	312	77	78	56	640	50	543
1979	3,893	1,632	288	72	75	66	692	42	597
1980	3,984	1,609	284	62	63	69	669	42	604
1981 7/	3,993	1,598	289	60	60	84	679	45	620
				Per capita 8/					
				Pounds					
1976	18.1	7.2	1.5	0.3	0.5	0.2	3.4	0.2	2.4
1977	17.7	7.7	1.5	.3	.4	.2	3.2	.3	2.4
1978	17.6	7.7	1.4	.4	.4	.3	2.9	.2	2.4
1979	17.3	7.3	1.3	.3	.3	.3	3.1	.2	2.7
1980	17.5	7.1	1.3	.3	.3	.3	2.9	.2	2.7
1981 7/	17.4	7.0	1.3	.3	.3	.4	3.0	.2	2.7

1/ Excludes milk used on farms where produced and distribution from USDA supplies; includes sales to the Armed Services for use in the United States. 2/ Includes milk and cream mixtures. 3/ Includes skim milk, buttermilk, flavored milk drinks, and yogurt. 4/ Fat solids basis. 5/ Excludes cottage cheese. 6/ Includes full-skim American. 7/ Preliminary or estimated. 8/ Based on resident population, except fluid milk product sales--based on estimated population using fluid products from purchased sources. 9/ Includes modified whey products starting 1975.

Table 11--Milk solids and selected dairy products: Supply and utilization, 1976-81

Year and item	Supply				Utilization					Ending stocks
	Beginning stocks	Production	Imports	Total supply	Foreign: Exports	Foreign: Shipments 1/	Domestic: Military	Domestic: Civilian	Domestic: Total use 2/	
	Million pounds									
Milkfat										
1976	137	4,402	74	4,613	17	21	36	4,279	4,410	203
1977	203	4,481	75	4,759	16	21	35	4,314	4,442	317
1978	317	4,455	87	4,859	13	21	34	4,412	4,535	324
1979	324	4,518	88	4,930	13	22	41	4,483	4,612	318
1980 3/	318	4,692	81	5,091	9	20	37	4,503	4,619	472
1981 3/	472	4,841	87	5,400	92	22	37	4,536	4,736	564
Solids-not-fat										
1976	579	10,335	76	10,990	178	37	63	8,244	10,337	633
1977	633	10,548	81	11,262	201	39	64	8,218	10,442	820
1978	820	10,458	95	11,373	287	47	66	8,231	10,654	719
1979	719	10,613	102	11,434	235	49	70	8,299	10,792	642
1980 3/	642	11,032	93	11,770	313	48	68	8,258	10,982	788
1981 3/	788	11,393	92	12,273	398	49	64	8,280	11,106	1,167
Butter 4/										
1976	11	979	2	992	1	3	7	934	945	47
1977	47	1,086	2	1,135	2	2	5	941	950	185
1978	185	994	2	1,181	1	4	3	966	974	207
1979	207	985	2	1,194	1	4	6	1,007	1,018	178
1980 3/	178	1,145	2	1,325	1	3	4	1,013	1,021	304
1981 3/	304	1,237	3	1,544	119	2	4	990	1,115	429
American cheese										
1976	308	2,049	14	2,371	6	16	4	1,933	1,959	412
1977	412	2,043	16	2,471	7	12	7	2,022	2,048	423
1978	423	2,074	18	2,515	4	12	9	2,111	2,136	379
1979	379	2,190	18	2,587	5	15	21	2,139	2,180	407
1980 3/	407	2,375	18	2,800	5	13	14	2,176	2,208	592
1981 3/	592	2,585	20	3,197	4	12	10	2,282	2,308	889
Other cheese										
1976	61	1,272	193	1,526	3	10	3	1,443	1,459	67
1977	67	1,315	194	1,576	3	16	2	1,491	1,512	64
1978	64	1,445	224	1,733	6	22	2	1,625	1,655	78
1979	78	1,527	230	1,835	7	20	3	1,699	1,729	106
1980 3/	106	1,609	213	1,928	8	20	2	1,799	1,829	99
1981 3/	99	1,620	228	1,947	8	21	2	1,829	1,860	87
Evaporated and condensed milk 5/										
1976	59	1,203	1	1,263	49	76	0	1,067	1,192	71
1977	71	1,039	1	1,111	34	62	1	939	1,036	75
1978	75	1,013	1	1,089	37	81	2	899	1,019	70
1979	70	1,035	0	1,105	42	73	2	911	1,028	77
1980 3/	77	945	7/	1,022	43	71	3	853	970	52
1981 3/	52	992	5	1,049	47	68	1	887	1,003	46
Nonfat dry milk 6/										
1976	469	926	2	1,397	126	8	0	764	911	486
1977	486	1,107	2	1,595	156	8	0	729	917	678
1978	678	920	2	1,600	261	9	1	689	1,015	585
1979	585	909	2	1,496	185	12	1	741	1,010	486
1980 3/	486	1,161	2	1,649	265	9	2	710	1,062	587
1981 3/	587	1,306	3	1,896	239	5	2	715	1,006	890

1/ To U.S. territories.
2/ Includes fed to animals or wasted where applicable.
3/ Preliminary.
4/ Includes butter equivalent of butteroil.
5/ Unskimmed includes both bulk and case goods.
6/ Human food only.
7/ Less than 50,000 pounds.

Per capita civilian disappearance

Item	1979	1980	1981	1980-81 Change
	Pounds			*Percent*
Products:				
Butter	4.5	4.5	4.3	−4.4
American cheese	9.6	9.6	10.0	+4.2
Other cheese	7.6	8.0	8.0	0
Ice cream	17.1	17.3	17.2	−.6
Nonfat dry milk	3.3	3.1	3.1	+0
Canned milk	4.1	3.8	3.9	+2.6
Fluid milk and cream[1]	232.4	227.3	223.1	−1.8

[1]Milk equivalent, fat–solids basis.

Uncommitted CCC stocks

Item	March[1]	
	1981	1982
	Million pounds	
Butter	367.1	306.2
American cheese	266.9	584.6
Nonfat dry milk	587.5	920.3

lier, while American cheese, at 71 million pounds, was down 4 million.

For all of calendar 1981, USDA net removals were equivalent to the production of 1 million cows or 12.9 billion pounds of milk, compared with 8.8 billion pounds in 1980—an increase of almost 50 percent (table 12). Relative to a year earlier, purchases of cheese increased 61 percent, while butter was up 37 percent, and nonfat dry milk expanded 34 percent. Given the previously discussed milk production and commerical use ranges, and assuming no change in imports and a small increase in ending stocks, USDA milk-equivalent net removals will likely be between 11 and 16 billion pounds for the 1980/81 marketing year.

FEDERAL ORDER SUMMARY[1]

Number of Producers Continues To Increase

During 1981, an average of 119,200 producers delivered milk to handlers regulated under Federal milk marketing orders, an increase of around 1,700 from the previous year in comparable markets. This 14-percent rise represented the second consecutive year in which the number of producers increased. During the year, the average number generally showed an upward trend, ranging from a low of 118,200 in February to a high of 120,650 in December.

Federal order producers delivered nearly 88 billion pounds of milk during the year, up almost 5 percent from the previous year's total. Milk delivered by these order producers accounted for about 68 percent of all milk sold to plants and dealers in the country. The average daily

USDA dairy purchases[1]

Item	January-February		
	1981	1982	Change
	Million pounds		*Percent*
Butter	100.9	111.8	+10.8
American cheese	75.4	71.2	−5.6
Nonfat dry milk	116.1	143.0	+23.2
Evaporated milk	3.6	2.4	−33.3
Milk equivalent	2,836	3,017	+6.4

[1]Deliveries minus unrestricted sales.

delivery per producer in Federal order markets continued its upward trend, rising to 2,017 pounds, an increase of 3.3 percent over 1980. This is the first time that the average delivery exceeded 2,000 pounds a day.

Milk used in Class I dropped to 40.7 billion pounds during 1981, a decrease of 0.4 percent from the previous year. With less Class I use and greater deliveries from Federal order producers, annual Class I utilization dropped 3 percentage points to 46 percent.

Producer blend prices in Federal order markets averaged $13.63 per cwt during 1981, an increase of 77 cents over the preceding year. This 6-percent rise in blend prices represented the smallest percentage increase since 1977. During 1981, minimum Class I prices increased by 93 cents to an average of $14.70. As was the situation for blend prices, the 6.8-percent rise in Class I prices was the smallest annual percentage increase since 1977.

These relatively smaller increases in blend and Class I prices reflected the sharp rise in U.S. milk production relative to commercial use and no increase in the dairy price support level. This is because the Minnesota-Wisconsin (M-W) manufactured grade milk price, which is determined by the interaction of supply and demand, was up only 5.8 percent last year. The M-W price is the basic mover of minimum class prices in all Federal order markets. Class I prices negotiated by cooperative associations also displayed the relative lack of price increases to some extent. During 1981, the estimated average over-order payment on Class I milk in Federal order markets was 64 cents per cwt, an increase of 2 cents from 1980's average.

Sales of lowfat and skim milk products again provided the major strength in the sales picture for fluid milk, continuing the long-term trend towards milk products with less butterfat. Sales of these items increased 3 percent during 1981 and partially offset the 3.5-percent decline in whole milk items. In total, sales of fluid milk items dropped 0.8 percent during the year.

While the sales of lowfat and skim milk items did increase during the year, the 3-percent gain is the smallest rise in over two decades. However, during that time period, these items have grown from less than 9 percent of total fluid items to nearly 44 percent.

[1]Prepared by Eugene Krueger, Dairy Division, Agricultural Marketing Service, USDA. (202) 447-6320

Table 12--Dairy products removed from the commercial market by programs of the USDA, 1970-81

Year and month	Removals 1/					Solids content of removals			
	Butter 2/	American cheese 3/	Evaporated milk 4/	Nonfat dry milk 5/	Milk equivalent	Milkfat	Solids-not-fat	As a percentage of marketings: Milkfat	As a percentage of marketings: Solids-not-fat
	Million pounds							Percent	
1970	246.4	48.9	48.4	451.6	5,774	221.1	460.7	5.3	4.8
1971	292.2	90.7	111.4	456.2	6/7,268	6/276.5	6/490.1	6.6	5.0
1972	233.7	30.4	97.0	345.0	6/5,345	6/208.4	6/362.0	4.9	3.6
1973	97.7	3.2	53.7	36.8	6/2,185	6/ 84.9	6/ 49.0	2.1	.5
1974	32.7	60.3	28.3	265.0	6/1,346	6/ 50.4	6/280.2	1.2	2.9
1975	63.4	68.2	24.5	394.5	2,036	77.7	405.6	1.9	4.2
1976	39.4	38.0	21.8	157.1	1,236	46.8	167.2	1.1	1.7
1977	221.8	148.2	15.9	461.7	6,080	230.8	494.9	5.3	4.8
1978	112.0	39.7	17.6	285.0	2,743	106.3	290.7	2.4	2.8
1979	81.6	40.2	16.4	255.3	2,119	81.7	261.8	1.8	2.5
1980	257.0	349.7	17.5	634.3	8,800	325.3	723.6	6.9	6.7
1981	351.5	563.0	18.6	851.3	12,861	471.7	999.2	9.7	8.9
1980 7/									
January	26.7	18.0	1.3	34.9	732	27.6	39.6		
February	10.4	22.1	1.2	32.1	435	15.8	38.0		
March	4.0	22.6	.8	26.2	307	10.7	32.3		
April	51.8	23.7	1.5	59.6	1,306	49.9	65.4		
May	60.8	37.7	1.2	89.7	1,630	61.8	98.7		
June	44.5	57.0	1.0	103.1	1,483	55.0	117.4		
July	11.6	62.0	2.4	96.2	857	30.2	112.2		
August	-2.7	45.3	1.5	48.5	395	12.9	60.9		
September	.7	19.2	1.0	33.9	206	7.1	38.7		
October	16.5	8.8	2.1	38.3	432	16.6	40.1		
November	15.0	12.4	1.2	32.6	436	16.4	35.5		
December	17.8	21.1	2.3	39.3	581	21.6	44.9		
Total 8/	257.0	349.7	17.5	634.3	8,800	325.3	723.6	6.9	6.7
1981 7/									
January	51.6	31.9	1.8	55.4	1,385	52.3	64.0		
February	49.3	43.5	1.8	60.7	1,451	54.3	72.6		
March	42.5	57.5	1.5	73.5	1,449	53.4	89.1		
April	46.7	70.1	1.1	87.4	1,660	60.9	106.3		
May	48.9	70.2	1.2	97.5	1,706	62.7	116.1		
June	31.4	79.5	2.6	102.4	1,439	51.8	123.8		
July	17.7	75.2	1.6	75.7	1,113	39.1	96.4		
August	12.1	33.3	1.5	70.0	581	21.1	78.0		
September	6.9	28.6	1.6	54.0	429	15.3	61.1		
October	23.5	27.2	1.2	65.3	756	28.2	71.6		
November	3.0	18.0	1.7	45.0	245	8.7	49.2		
December	17.9	28.0	1.2	64.3	648	24.0	70.9		
Total 8/	351.5	563.0	18.6	851.3	12,861	471.7	999.2	9.7	8.9

1/ Delivery basis, after unrestricted domestic sales. 2/ Includes butter equivalent of anhydrous milkfat, PIK, and purchases under Sec. 709, and 4a. 3/ Includes purchases under Sec. 709, and 4a. 4/ Includes purchases under 4a. 5/ Includes PIK certificates issues, and purchases under Sec. 709 and 4a. 6/ Includes dry whole milk purchases beginning November, 1971. 7/ Preliminary. 8/ Totals may not add due to rounding.

Table 13--Dairy Products: U.S. imports, quota and non-quota, total 1980, and January-December, 1980-81 1/

Product	Calendar year quota	1980 imports	December			Cumulative, January-December		
			1980	1981	1981 as a % of 1980	1980	1981	1981 as a % of 1981
		Thousand pounds			Percent	Thousand pounds		Percent
Cheese, quota types								
American-Cheddar	12,205.3	10,710	1,513	2,477	164	10,710	12,099	113
-Other	7,545.4	7,367	3,390	3,352	99	7,367	4/7,842	106
Italian-Original loaves	12,374.4	5,998	551	2,127	386	5,998	7,840	131
-Other	1,550.0	1,059	14	72	514	1,059	619	58
Edam and Gouda-Natural	9,208.6	8,572	976	829	85	8,572	9,029	105
-Processed	3,151.3	2,019	408	458	112	2,019	3,088	153
Blue Mold	5,469.6	4,388	645	681	106	4,388	5,095	116
Swiss-Emmenthaler	70,278.1	66,608	10,897	7,396	68	66,608	66,116	99
-Gruyere process	16,479.0	14,060	1,816	1,872	103	14,060	13,300	95
Other-Over 0.5% fat	89,466.8	67,370	17,995	27,162	151	67,370	77,337	115
-Under 0.5% fat	12,621.1	7,194	2,462	2,526	103	7,194	10,110	141
Total	240,349.6	195,345	40,669	48,950	120	195,345	212,475	109
Cheese, non-quota types								
Other cow's milk cheeses 2/		12,200	1,486	1,261	85	12,200	12,463	102
Miscellaneous 3/		905	121	57	47	905	894	99
Pecorino		21,433	2,080	2,531	122	21,433	20,615	96
Roquefort		1,278	68	77	113	1,278	1,214	95
Total		35,816	3,756	3,926	105	35,816	35,187	98
Total cheese, Quota and Non-quota	240,349.6	231,161	44,425	52,876	119	231,161	247,661	107
Other quota products								
Butter	707.0	586	78	142	182	586	4/1,827	312
Butteroil	1,200.0	1,200	---	---	---	1,200	1,200	100
Butterfat mixtures	2,580.0	4/2,676	338	---	5/	2,676	1,204	45
Ice cream	3,377.3	1,174	3	---	5/	1,174	---	5/
Frozen cream	12,540.0	9,849	824	580	70	9,849	12,413	126
Nonfat dry milk	1,807.0	4/4,890	---	392	6/	4/4,890	4/2,751	56
Dried buttermilk and whey	496.0	4/498	80	128	160	4/498	383	77
Evaporated milk	1,312.0	1	---	283	6/	1	4/4,954	6/
Condensed milk	4,079.0	418	64	5	8	418	386	92
Chocolate crumb-Regular	21,409.0	14,480	1,106	667	60	14,480	11,691	81
-Lowfat	4,680.0	1,888	120	200	167	1,888	1,026	54
Animal feed with milk solids	16,300.0	14,487	48	303	631	14,487	15,622	108
Non-quota products								
Casein		151,226	14,540	10,644	73	151,226	127,823	85
Lactose		3,044	71	290	408	3,044	2,381	78
Milk equivalent, fat solids basis, total all products	2,234,270	2,106,843	368,107	413,340	112	2,106,843	2,325,008	110

1/ Revised but still preliminary. 2/ Primarily soft, ripened cheeses. 3/ Gjetost, Bryndza, Gammelost and Noekkelost, and Goya. 4/ Probable error in reported data. 5/ Less than 1. 6/ More than 1,000.

SOURCE: U.S. Department of Commerce, Bureau of the Census.

New Order Added

Following approval by producers, a new Federal order was added, bringing the total to 49. The Alabama-West Florida order, which will become fully effective on May 1, covers the entire State of Alabama and four adjacent counties in western Florida. There will be three classes of utilization, which are the same as those included in most other orders. Class I will be fluid milk products; Class II will include the soft manufactured products, such as fluid cream products, ice cream, cottage cheese, eggnog, and yogurt; and Class III will be the hard manufactured products, such as hard cheese, butter, and nonfat dry milk. The Class I price in the base zone (Birmingham) is the Minnesota-Wisconsin (M-W) price for the second preceding month plus a Class I differential of $2.30 per cwt. The Class II price will be the M-W price for the month plus 10 cents, and the Class III price will be the M-W price for the month. The order provides for a market-wide pool. It also includes a base-excess plan for paying producers. The base-forming period will be September through January, while the base-paying months will be March through July.

FOREIGN TRADE AND TRENDS

Inports and Exports Larger

During 1981, total imports of dairy products were equivalent to 2.3 billion pounds of milk (fat solids basis), up 10 percent from 1980 and equal to about 2 percent of commercial disappearance (table 13). Cheese imports on a milk-equivalent basis were about 85 percent of all dairy imports during 1981, compared with 88 percent in 1980. Meanwhile, casein and lactose imports (not included in the milk-equivalent calculations) were down 15 and 22 percent, respectively. On a product-weight basis, over 247.7 million pounds of both quota and non-quota cheese was imported during 1981, an increase of 7 percent. No change is expected in the level of milk-equivalent imports during 1982.

Dairy product imports[1] (Quota and non-quota)

Year	Yearly quota[1]	Imports subject to quota	Imports not subject to quota	Total
		Million pounds		
1970	946	841	1,033	1,874
1971	973	776	580	1,356
1972	1,166	1,023	671	1,694
1973	3,608	3,263	596	3,859
1974	2,293	1,968	955	2,923
1975	1,306	976	693	1,669
1976	1,306	1,037	906	1,943
1977	1,306	1,119	849	1,968
1978	1,306	1,226	1,084	2,310
1979	1,306	1,233	1,072	2,305
1980	2,231	1,818	289	2,107
1981	2,234	2,057	268	2,325

[1]Milk equivalent. [2]Includes temporary quotas authorized in 1973 and 1974.

U.S. dairy trade (milk equivalent)

Year and quarters	Imports: Cheese	Imports: Other	Exports	Shipments[1]
		Million pounds		
1979				
1st	251	133	98	150
2nd	432	44	90	167
3rd	517	34	74	143
4th	829	65	100	160
Year[2]	832	276	362	620
1980				
1st	224	142	108	135
2nd	321	35	88	139
3rd	489	18	75	142
4th	832	46	99	146
Year[2]	1,866	241	370	562
1981				
1st.	306	97	85	162
2nd	393	75	528	138
3rd	451	125	706	155
4th	809	67	1,777	131
Year[2]	1,960	365	3,096	586

[1]To U.S. territories. [2]May not add due to rounding.

Exports of U.S. dairy products were equal to 3.1 billion pounds of milk during 1981, more than eight times larger than 1980. The increase was due to the sale of CCC butter to New Zealand, part of which was exported during the second-half of the year. Exports will continue relatively large in 1982, reflecting the rest of the New Zealand butter, as well as the recent CCC sales to CARE and the Catholic Relief Services and the barter agreement with Jamaica.

Casein Decision

On January 29, 1982, the International Trade Commission (ITC) published a report based on its investigation, which found that casein and lactalbumin imports were not materially interfering with the USDA domestic dairy price support program. The ITC concluded that there was no more than slight interference, but not to an extent that could be considered "material" as required by Section 22 of the Agricultural Adjustments Act of 1933.

World Output and Use

Preliminary data for 1981 indicates that cow's milk production in the 35 major dairy countries was only 0.8 million tons (less than 1 percent) larger than a year earlier. Production in 1982 is expected to again increase less than 1 percent, because of lower net income prospects in the European Community, poor forage and grain supplies in the USSR and Eastern Europe, and less-than-normal moisture conditions in New Zealand.

World production of cheese (excluding cottage cheese) increased about 2.5 percent in 1981 and is expected to expand 2 to 3 percent in 1982. Butter output will likely level out in 1982, following a 2-percent decline in 1981. Meanwhile, skim milk will be used to make 3 percent more nonfat dry milk and about 8 percent less casein in 1982.

Table 14.--U.S. Dairy Situation at a Glance

Item	Unit or base period	1980		1981							1982
		Jan.	Year	Jan.	Feb.	March	Oct.	Nov.	Dec.	Year	Jan.
Production and cow numbers:											
Total milk	Mil. lb.	10,320	128,525	10,786	10,129	11,511	10,751	10,384	10,847	132,634	11,047
Milk per cow	Lb.	958	11,889	992	931	1,058	981	946	986	12,147	1,003
Number of milk cows	Thou.	10,769	10,810	10,870	10,880	10,880	10,963	10,982	10,998	10,919	11,015
Prices received by farmers:											
All milk, sold to plants, 100 pounds	Dol.	12.80	13.00	14.10	14.00	13.80	14.00	14.00	14.00	13.75	13.90
Percentage of parity 1/	Pct.	71	72	69	69	69	67	66	67	69	65
Manufacturing grade milk, 100 pounds	Dol.	11.70	12.00	13.00	12.90	12.90	12.90	13.00	13.00	12.75	13.00
Parity equivalent	Dol.	15.31	16.00	17.53	17.62	17.71	17.89	17.98	17.80	17.84	18.59
Fat content	Pct.	3.80	3.67	3.79	3.74	3.68	3.79	3.81	3.82	3.67	3.81
Minnesota-Wisconsin (3.5% fat), 100 pounds	Dol.	11.37	11.88	12.64	12.66	12.67	13.52	12.52	12.56	12.57	12.55
Milk eligible for fluid market, 200 pounds	Dol.	13.00	13.20	14.30	14.20	14.00	14.20	14.20	14.20	13.96	14.10
Price ratios and dairy ration values:											
Milk-feed 2/	Lb.	1.54	1.47	1.39	1.40	1.42	1.53	1.58	1.55	1.44	1.55
Manufacturing grade milk-hog	Lb.	.32	.32	.32	.31	.33	.29	.31	.33	.30	.30
Manufacturing grade milk-beef	Lb.	.18	.19	.22	.22	.22	.23	.24	.25	.22	.24
Value of concentrate ration fed milk cows	Dol.	7.00	7.42	8.35	---	---	7.73	---	---	N.A.	7.60
Farm cash receipts from dairy products	Mil. dol.	1,317	16,598	1,561	1,471	1,632	1,543	1,504	1,566	18,756	N.A.
Production of factory products:											
Butter	Mil. lb.	105.7	1,145.3	121.3	110.1	116.7	100.5	94.2	108.9	1,236.8	128.3
American cheese, whole milk	Mil. lb.	182.7	2,374.6	212.2	198.1	224.5	198.4	191.3	217.0	2,584.8	218.4
Cheese, other than American	Mil. lb.	129.5	1,608.5	130.6	118.4	140.9	140.4	135.0	148.4	1,619.7	128.6
Canned milk, unskimmed	Mil. lb.	59.6	724.7	55.7	54.7	60.4	57.0	60.3	68.2	751.7	58.1
Dry whole milk	Mil. lb.	6.6	82.7	6.8	6.0	6.8	9.2	8.6	8.8	92.1	9.2
Frozen products 3/	Mil. gal.	78.6	1,166.1	73.0	80.5	98.4	89.3	78.3	77.7	1,166.9	69.1
Creamed cottage cheese	Mil. lb.	68.8	822.6	63.4	59.5	70.3	62.5	58.8	55.7	772.0	59.1
Total whole milk equivalent 4/	Mil. lb.	5,771	71,687	6,212	5,903	6,718	5,902	5,590	6,155	75,637	6,370
Nonfat dry milk, human use	Mil. lb.	74.3	1,160.7	92.0	95.3	110.0	90.4	88.2	109.6	1,305.8	104.1
Wholesale prices:											
Butter, Grade A, Chicago, pound	Ct.	139.2	139.3	147.2	147.2	147.2	150.6	148.9	148.1	148.0	147.5
Cheese, American (40-pound blocks), f.o.b. Wisconsin assembling points, pound	Ct.	125.6	133.0	139.3	139.2	138.8	140.9	141.3	139.4	139.4	138.3
Evaporated milk, case	Dol.	19.05	19.85	21.15	21.41	21.70	21.81	21.94	21.94	21.68	21.94
Dry whole milk, pound	Ct.	105.7	110.8	118.6	119.2	119.1	118.1	118.8	118.8	118.5	118.9
Nonfat dry milk, pound	Ct.	83.9	88.7	93.8	93.6	93.7	94.4	94.2	94.0	93.9	93.6
Dairy products (BLS)	1967=100	221.0	230.6	244.7	245.0	245.1	247.4	246.9	247.2	245.6	247.7
Retail prices (BLS):											
Consumer price index 5/	1967=100	233.2	246.8	260.5	263.2	265.1	279.9	280.7	281.5	272.3	282.5
All food 5/	1967=100	243.8	254.6	268.6	270.8	272.2	277.6	277.1	277.8	274.6	281.0
All dairy products 5/	1967=100	218.4	227.4	240.1	242.1	242.6	244.6	245.0	245.5	243.6	245.8
Fluid milk and cream	12/77=100	123.2	127.0	133.0	134.0	134.3	134.7	134.9	135.2	134.5	135.1
Whole milk	1967=100	202.3	208.4	218.2	219.3	219.9	220.2	220.8	221.2	220.2	221.2
Other	12/77=100	122.1	126.3	132.1	134.2	134.4	135.2	134.9	135.3	134.5	135.1
Manufactured dairy products	12/77=100	123.8	130.6	139.6	140.8	141.1	143.5	143.5	143.9	142.2	144.4
Butter	1967=100	216.9	228.0	242.7	242.2	243.0	247.2	248.0	248.7	245.5	249.3
Cheese	12/77=100	123.5	129.5	138.2	139.2	139.8	140.9	141.1	141.0	140.3	142.0
Frozen desserts	12/77=100	124.0	132.8	143.6	145.9	145.3	149.9	149.3	150.3	147.3	150.8
Other	12/77=100	119.8	126.4	133.3	134.5	135.1	137.0	138.7	139.7	136.3	138.4
Margarine	1967=100	248.3	249.7	256.9	256.8	255.7	256.6	255.2	255.7	256.3	257.8
Stocks, end of month:											
Creamery butter	Mil. lb.	191.0	---	332.1	372.3	407.4	470.0	451.1	429.2	---	433.1
Cheese, total 6/	Mil. lb.	516.1	---	719.6	724.3	734.5	963.5	953.1	975.8	---	966.2
Canned milk, unskimmed	Mil. lb.	75.6	---	42.8	37.9	40.5	85.8	59.4	46.8	---	46.3
Dry whole milk	Mil. lb.	4.7	---	6.5	4.8	3.9	2.8	4.3	6.0	---	7.6
Total whole milk equivalent 7/	Mil. lb.	8,878	---	13,806	14,688	15,506	19,146	18,620	18,298	---	18,379
Nonfat dry milk	Mil. lb.	454.4	---	579.0	599.4	632.5	835.2	861.5	889.7	---	908.2
Commercial disappearance:											
Creamery butter	Mil. lb.	77.1	878.8	66.3	49.5	74.2	57.0	100.8	87.1	877.8	N.A.
Cheese, American	Mil. lb.	175.6	2,023.9	182.8	133.9	185.7	179.5	184.7	175.8	2,090.8	N.A.
Cheese, other than American	Mil. lb.	129.9	1,827.9	141.7	138.5	153.5	166.6	163.3	195.9	1,860.0	N.A.
Canned milk, unskimmed	Mil. lb.	59.8	732.5	64.4	58.1	56.6	72.7	85.3	79.9	744.2	N.A.
Milk in all products	Mil. lb.	9,523	119,160	9,271	8,267	10,184	9,734	10,566	10,244	120,306	N.A.
Nonfat dry milk	Mil. lb.	47.5	538.9	40.5	23.1	33.8	28.8	51.2	34.8	455.6	N.A.
USDA net removals:											
Butter	Mil. lb.	26.7	257.0	51.6	49.3	42.5	23.5	3.0	17.9	351.5	55.1
Cheddar cheese	Mil. lb.	18.0	349.7	31.9	43.5	57.5	27.2	18.0	28.0	563.0	32.9
Nonfat dry milk	Mil. lb.	34.9	110.2	55.4	60.7	73.5	65.3	45.0	64.3	851.3	71.1
Evaporated milk	Mil. lb.	1.3	17.5	1.8	1.8	1.5	1.2	1.7	1.2	18.6	.8
Total whole milk equivalent	Mil. lb.	732	8,800	1,385	1,451	1,449	756	245	648	12,861	1,464
Fluid sales, change from year earlier: 8/											
Whole milk	Pct.	-5.3	-3.5	-5.1	-4.7	-4.6	-2.9	-3.7	-1.6	-3.5	N.A.
Low-fat and skim milk	Pct.	+3.1	+5.3	+3.6	+4.9	+5.9	+ .2	+1.5	+2.0	+3.0	N.A.
Total fluid milk	Pct.	-2.0	- .1	-1.5	- .7	- .1	-1.5	-1.5	- .1	- .8	N.A.
Cream and cream mixtures	Pct.	+3.2	+2.0	-0.4	+0.4	+3.8	+4.3	+4.0	+6.0	+4.0	N.A.

1/ Seasonally adjusted prices as percentage of parity price.
2/ Different series than formerly published.
3/ Ice cream, ice milk, and sherbet.
4/ Includes manufactured products for which current monthly series are available.
5/ For all urban consumers starting January 1978.
6/ Natural, plus process American cheese held by CCC.
7/ Excludes cream and bulk condensed milk.
8/ Daily average sales in Federal and State Marketing areas.
N.A. Not Available

COSTS AND MARGINS FOR FLUID WHOLE MILK AND BUTTER

By Webster Jones[1]

ABSTRACT: This article reports the farm/retail price spread for a 1/2-gallon container of Grade A whole milk and butter in a 1-pound carton of quarter cuts. The farm value of a 1/2-gallon of milk in 1981 was about 62 cents, while it was about $1.33 for a pound of butter.

KEY WORDS: Farm/retail price spread.

Introduction

In response to widespread interest in farm-to-retail price spreads for foods, USDA publishes farm/retail spreads for a market basket of foods and for selected foods, including milk and butter.

Rising food prices in the early 1970's brought forth increasing interest from consumers, the Congress, and the Administration in farm/retail price spreads. To shed some light on questions about the level and change in food prices, research was undertaken to break down farm/retail spreads for certain foods into major cost functions and to break out the cost and profit elements involved.

Fluid milk and butter were the two dairy foods selected—fluid in the form of a 1/2-gallon container of Grade A whole milk and butter in a 1-pound carton of quarter cuts. Data series, along with analyses, for these products are included for 1972 to 1981.

Fluid Milk

The retail price for a 1/2-gallon of Grade A whole milk continued upward in 1981, but at a much slower pace than in 1979 and 1980 (table 1). Monthly retail prices averaged $1.12, 6.5 percent above 1980, much less than the 11.5- and 9.3-percent increases in 1979 and 1980. The relatively flat monthly prices of 1981 (the December price was only 2.5 cents above January's) caused year-to-year price differences to narrow and by year-end were about half as large as at the beginning. The 6.5-percent increase in the average retail price reflects a 6.3-percent increase in the farm value, and a 6.6 percent higher processing and marketing cost.

The 1981 farm value of a 1/2-gallon of Grade A whole milk was 61.8 cents, up 6.3 percent from the previous year, compared with 11.7- and 10.4-percent increases in 1979 and 1980, respectively. The dairy farmer's share of the consumer's dollar spent for fluid milk was 55.3 percent in 1981, almost the same as the 55.4 percent in 1980.

Several factors account for the slight drop in the farm share in 1981. Consumer demand for fluid milk was generally weak, with consumption down slightly from 1980. The Nation's milk supply increased 3 percent over 1980, causing a large diversion of Grade A milk to manufactured products, thereby having a depressing effect on the price of manufacturing grade milk, which provides the base for determining the price of fluid milk. In addition, weaknesses in the general economy helped to reduce milk consumption and, therefore, hold back price increases.

The farm value of Grade A milk (fluid use) was based on the price (plus over-order payments) of Class I milk in Federal orders. In 1981, this price was estimated at $15.24 per cwt of milk at 3.5 percent butterfat, up 93 cents from 1980. This price was adjusted to 3.3 percent butterfat, the level for most milk sold in retail stores. To obtain the farm value, the price was reduced by the farmers' cost of transporting milk to processing plants.

The total farm/retail price spread was 49.9 cents in 1981, 3.1 cents higher than in 1980 and 6.1 cents more than the 1979. The 1981 gain of 6.6 percent in the spread was considerably below the 11.4-percent rise in the marketing cost index (11 months).

The procuring margin was 4.1 cents in 1981, up 10.8 percent from 1980 (tables 2 and 3). This function includes milk quality control, milk pickup from farmers, and hauling to processors. Transportation charges accounted for almost 73 percent of the procuring function.

The processing and wholesaling margin totaled 29.9 cents, up 1.5 cents from 1980. These two functions are usually performed by the same firm. Data for the functions were obtained from 30 processor-distributors representative of moderate-size plants. However, none of the 30 firms were owned by supermarket chains, which now account for about 17 percent of fluid milk sales.

The processing margin was 14.9 cents in 1981, 6 percent higher than in 1980. This function includes milk receiving, storing, pasteurizing, homogenizing, packaging, and loading for delivery. Packaging materials and labor accounted for 35.6 percent and 31.1 percent, respectively, of the processing margin.

The wholesaling margin was 15 cents in 1981, up 4.2 percent from 1980. Labor and transportation accounted

[1]Dairy Economist, Dairy Research Section, Animal Products Branch, National Economics Division, Economic Research Service, USDA, (202) 447-8840.

Table 1--Grade A whole milk: Farm value, marketing costs by function, and retail price per 1/2-gallon

Year	Farm value	Marketing functions				Retail price
		Procuring	Processing	Wholesaling	Retailing	
		Cents				
1972	29.4	2.2	9.9	10.5	6.5	58.5
1973	33.2	2.5	11.6	11.6	5.1	64.0
1974	40.9	2.7	10.7	13.6	8.9	76.8
1975	41.2	2.8	11.4	13.6	7.9	76.9
1976	46.2	2.8	10.6	12.1	9.3	81.0
1977	45.1	2.9	13.2	12.6	8.3	82.1
1978	47.0	3.1	14.6	14.3	7.1	86.1
1979	52.5	3.4	15.1	14.2	10.8	96.0
1980	58.1	3.7	14.0	14.4	14.7	104.9
1981	61.8	4.1	14.9	15.0	16.0	111.7

Table 2--Grade A whole milk sold through retail stores: Cost components of marketing functions per 1/2-gallon, 1980

Cost	*Farm value 1/*	*Marketing functions*				*Retail price 4/*
		Procuring 2/	*Processing 3/*	*Wholesaling 3/*	*Retailing*	
		Cents				
Labor	---	0.51	4.23	6.91	---	---
Packaging materials	---	---	4.85	---	---	---
Transportation	---	2.65	---	2.92	---	---
Business taxes	---	.03	.13	.18	---	---
Depreciation	---	.08	.72	.51	---	---
Rent/royalty	---	.02	.20	.69	---	---
Repairs	---	.05	.56	.73	---	---
Advertising	---	.01	5/	.36	---	---
Net interest	---	.06	.04	.03	---	---
Energy	---	.07	.92	.16	---	---
Other	---	.24	1.93	1.21	---	---
Profit before taxes	---	---	.44	.68	---	---
Unallocated	---	0	0	0	14.70	---
Total	58.10	3.72	14.02	14.38	14.70	104.92

--- = Not estimated. 1/ Value at the plant of first receipt for a 1/2-gallon of milk containing 3.3 percent butterfat, less producer hauling charge. 2/ Includes laboratory and on-farm field service, pickup at farms, transportation, receiving and reloading as necessary, and final delivery to processor. 3/ Data for the processing and wholesaling functions represent costs for 30 processor-distributors that are representative of moderate-size, single-plant operations throughout the country. Very small plants and plants operated by retail food chains are not included. 4/ Average of BLS monthly prices. 5/ Dairy products, especially milk, are also advertised through cooperative ventures. This cost is not included.

for the largest share of this margin. Labor was a half, and transportation almost a fifth. However, the data may overstate the margin somewhat (thereby reducing the retailing margin) because the statistics exclude distribution costs for supermarket chains, who may have a labor-cost advantage.

Of the total farm/retail spread, the retailing margin was estimated at 16 cents, 1.3 cents above 1980.

Despite rising input prices, milk processing and distributing firms have held down unit costs by making adjustments in their operations. However, the largest input cost, the container, has risen with general price increases.

Probably the largest cost-reducing adjustment has been the gradual shift from retail delivery to the less labor-intensive wholesale delivery. In addition, the move to larger processing plants has contributed to cost savings because of economies of size. The shift to gallon-size containers has also held down unit costs.

Butter

The monthly retail prices of a 1-pound carton (quarter cuts) of butter averaged $1.99 for 1981, up 6.1 percent from 1980 (table 4). After showing a January-December increase of 17 cents in 1980, the retail price flattened during 1981, and the December price was less than 1 cent above January's price. The slowdown in the price rise caused the 1981 monthly price differential over 1980 to fall from 20 cents in March to less than 1 cent in November.

The 1981 farm value of butter was estimated at $1.32 a pound, up 7 cents from 1980, compared with 14-cent increases in 1979 and 1980. The farmers' share was two-thirds of the retail price, about the same as in the 2 previous years. The slowdown in the rise in the farm value was the result of a stable support price for milk, large increases (3 to 4 percent) in milk supplies in 1980 and 1981, and weakening demand for dairy products.

The resulting large supplies of surplus milk in 1981 were diverted mostly to storable manufactured products, with butter production increasing by 8.5 percent over 1980. A large part of the increased supplies of butter, powder, and cheese was purchased by the Commodity Credit Corporation to support the price of milk. These purchases totaled nearly 2 billion dollars in 1981, up 57.7 percent from 1980. Because of the high cost of the program and anticipated further increases in milk production, scheduled support price increases since October 1, 1980, have been rescinded before, or shortly after, the effective date.

The estimated monthly prices per cwt of milk used in butter had a maximum variation of only 10 cents during 1981 and, for the year, averaged $12.55 for 3.5 percent butterfat, 25 cents below the support price. (The $12.55 per cwt was a weighted average of the price of Federal order Class III, California Class 4, and manufacturing grade milk used in making butter.) The farm value of butter was calculated on the basis of relative net dollar returns to plants for bulk butter and nonfat dry milk produced from 100 pounds of milk. Gross dollar returns were adjusted by subtracting processing costs to obtain net returns. A farm-to-plant producer transportation charge was then subtracted to obtain the farm value.

The farm/retail margin for butter was 66.8 cents in 1981, up 4.5 cents from 1980. Most of the increase in the spread occurred in the processing and retailing functions, where cost increases were 8.6 and 3.8 percent, respectively.

The processing margin—manufacturing and wholesale printing and packaging—totaled 20.2 cents in 1981, up 1.6 cents from 1980 (table 5). The residual profit share of the processing margin amounted to 6.6 cents, or about one-third of the total. This estimate is 0.7 cent greater than for 1980. Excluding profit, the remaining margin was 13.6 cents, up 0.9 cent from 1980. The increase in this part of the margin was relatively small, despite considerably higher input costs, because the 8.5-percent increase in butter production enabled the firms to use labor, equipment, and other inputs more efficiently, thus helping to hold down unit costs. The margin includes costs of receiving, storing, pasteurizing, and separating whole milk into cream and skim milk, plus churning, cutting, packaging, and selling. In addition, the margin includes costs incurred by specialized wholesalers who buy bulk butter (usually in 68-pound containers), which they recondition, print, and package for sale. The processing margin represents data for 22 manufacturing plants and 5 specialized butter wholesalers.

The procuring margin was 4.7 cents in 1981, up 0.5 cent from 1980. This function includes transportation, laboratory and field service to producers, and the operation of receiving and reload stations. Transportation charges accounted for 4.2 cents, or 89 percent of the margin.

The continuing trends toward concentrating butter production in new and larger plants that allow for economies of size, adoption of new technology in processing, and the shift to packaging a larger share of retail-sized packages in the butter manufacturing plant also helped to offset the effects of higher input prices in 1981.

Table 3--Grade A whole milk sold through retail stores: Cost components of marketing functions per 1/2-gallon, 1981

Cost	Farm value 1/	Marketing functions				Retail price 4/
		Procuring 2/	Processing 3/	Wholesaling 3/	Retailing	
		Cents				
Labor	---	0.55	4.58	7.47	---	---
Packaging materials	---	---	5.24	---	---	---
Transportation	---	2.97	---	2.84	---	---
Business taxes	---	.03	.15	.21	---	---
Depreciation	---	.08	.67	.47	---	---
Rent/royalty	---	.02	.21	.70	---	---
Repairs	---	.05	.58	.76	---	---
Advertising	---	.01	5/	.38	---	---
Net interest	---	.06	.04	.03	---	---
Energy	---	.07	.93	.16	---	---
Other	---	.24	2.03	1.27	---	---
Profit before taxes	---	---	.46	.71	---	---
Unallocated	---	0	0	0	15.96	---
Total	61.77	4.08	14.89	15.00	15.96	111.70

--- = Not estimated. 1/ Value at the plant of first receipt for a 1/2-gallon of milk containing 3.3 percent butterfat, less producer hauling charge. 2/ Includes laboratory and on-farm field service, pickup at farms, transportation, receiving and reloading as necessary, and final delivery to processor. 3/ Data for the processing and wholesaling functions represent costs for 30 processor-distributors that are representative of moderate-size, single-plant operations throughout the country. Very small plants and plants operated by retail food chains are not included. Data are for 9 months. 4/ Average of BLS monthly prices. 5/ Dairy products, especially milk, are also advertised through cooperative ventures. This cost is not included.

Table 4--Butter: Farm value, marketing costs by function, and retail price per pound

Year	Marketing functions						
	Farm value	Procuring	Processing	Intercity transportation	Wholesaling	Retailing	Retail price
	Cents						
1972	61.3	2.3	8.3	1.4	3.1	10.7	87.1
1973	60.5	3.2	9.5	1.4	3.5	13.5	91.6
1974	58.0	3.3	9.1	1.5	5.8	16.8	94.5
1975	66.3	3.3	11.1	1.8	5.2	14.8	102.5
1976	82.5	3.2	12.4	2.5	6.3	21.2	128.1
1977	86.3	3.2	15.0	2.6	6.3	21.8	135.2
1978	97.3	3.4	15.2	2.7	6.3	24.1	149.0
1979	111.6	3.7	14.6	2.9	6.7	29.1	168.6
1980	125.5	4.2	18.6	3.5	6.8	29.2	187.8
1981	132.5	4.7	20.2	4.1	7.3	30.5	199.3

Table 5--Butter: Cost components of marketing functions per pound, 1981 1/

Cost	Farm value 2/	Procuring		Manufacturing	Wholesaling		Retailing	Retail price 5/
		Contract hauling 3/	Other 4/		Printing packaging	Hauling and warehousing		
	Cents							
Labor	---	---	0.21	2.62	1.37	---	---	---
Packaging materials	---	---	---	2.61	2.50	---	---	---
Transportation	---	4.22	---	---	---	4.08	---	---
Business taxes	---	---	.01	.13	.06	---	---	---
Depreciation	---	---	.02	.38	.06	---	---	---
Rent/royalty	---	---	.02	.15	.03	---	---	---
Repairs	---	---	.02	6/.25	.12	---	---	---
Advertising	---	---	---	7/.04	.02	---	---	---
Net interest	---	---	---	.27	.14	---	---	---
Energy	---	---	.07	1.28	.12	---	---	---
Other	---	---	.09	8/1.12	.42	---	---	---
Profit before taxes	---	---	---	5.97	.59	---	---	---
Unallocated	---	0	0	0	0	7.28	30.50	---
Total	132.53	4.22	.44	14.82	5.43	11.36	30.50	199.30

--- = Not estimated. 1/ Carton of 1/4-pound wraps. 2/ Market value of 0.811 pound of butterfat and 0.19 pound of skim milk at the plant, less the producer hauling charge. 3/ Of the contract hauling charge, 3.74 cents was paid by producers and 0.49 cent by plants. 4/ Costs to plants for hauling milk from farms in plant-owned trucks, laboratory and field service to producers, and operating receiving and reload stations. 5/ Average of BLS monthly prices. 6/ Excludes plant labor used to repair buildings and equipment; this is included in labor. 7/ Cost of advertising butter through cooperative ventures is not included. 8/ Includes cost of salt and color, general supplies, office supplies, insurance, and other expenses. Cost of seasonal storage is excluded.

LIST OF TABLES

Table		Page
1	Milk cow numbers, milk per cow, and changes by production regions, 1981	5
2	Milk production, milk per cow, and milk cows on farms, by months, 1978-81, with comparisons	6
3	Milk: Production by production regions, 1980 and 1981, with comparisons	8
4	Milk prices received by farmers	11
5	Retail dairy product prices	12
6	Production of selected manufactured dairy products, 1980-81	13
7	Commercial disappearance: Total milk, annual and by quarters, 1980-81	14
8	Commercial disappearance: Selected dairy products, United States, annual 1970-81, quarters, 1980-81	14
9	Factors influencing and indicative of the demand for milk and dairy products, United States, selected years, 1960-81	15
10	Milk and dairy product sales (domestic disappearance, commercial sources) total and per capita, United States, 1976-81	16
11	Milk solids and selected dairy products: Supply and utilization, 1976-81	17
12	Dairy products removed from the commercial market by programs of the United States Department of Agriculture, 1970-81	19
13	Dairy Products: U.S. imports, quotas and non-quota, total 1980, and January-December, 1980-81	20
14	U.S. Dairy Situation at a Glance	22

SPECIAL ARTICLE

1	Grade A whole milk: Farm value, marketing costs by function, and retail price per 1/2-gallon	24
2	Grade A whole milk sold through retail stores: Cost components of marketing functions, per 1/2-gallon, 1980	24
3	Grade a whole milk sold through retail stores: Cost components of markeitng functions, per 1/2-gallon, 1981	26
4	Butter: Farm value, marketing costs by function, and retail price per pound	26
5	Butter: Cost components of marketing functions per pound, 1981	27

☆U.S. GOVERNMENT PRINTING OFFICE: 1982-360-930:ERS-1094

ORDER FORM

Reports of USDA's Economic Research Service

Outlook & Situation Reports	Subscription fee Domestic	Subscription fee Foreign	Single copy Domestic	Single copy Foreign
☐ Agricultural Exports (4 issues)	$8.00	$10.00	$2.50	$3.15
☐ Cotton & Wool (4)	9.00	11.25	2.50	3.15
☐ Dairy (4)	9.00	11.25	2.50	3.15
☐ Fats & Oils (4)	9.00	11.25	2.50	3.15
☐ Feed (4)	9.00	11.25	2.50	3.15
☐ Fruit (4)	9.00	11.25	2.50	3.15
☐ Livestock & Meat	Prices available from EMS Information			
☐ Poultry & Egg	Prices available from EMS Information			
☐ Rice (2)	5.50	6.90	3.00	3.75
☐ Sugar & Sweetener (4)	9.00	11.25	2.50	3.15
☐ Tobacco (4)	9.00	11.25	2.50	3.15
☐ Vegetable (4)	9.00	11.25	2.50	3.15
☐ Wheat (4)	9.00	11.25	2.50	3.15
☐ World Agriculture (11) (Includes 3 World Agriculture reports and 8 regional summaries.)	Prices available from EMS Information			

Other Periodicals	Subscription fee Domestic	Subscription fee Foreign	Single copy Domestic	Single copy Foreign
☐ Agricultural Economics Research (4)	10.00	12.50	Not available	
☐ Agricultural Outlook (11)	30.00	37.50	Not available	
☐ Economic Indicators of the Farm Sector (5)	13.00	16.25	–	–
☐ Foreign Agricultural Trade of the U.S. (8) (6 issues plus 2 supplements)—(Supplement single copy prices available from EMS Information.)	19.00	23.75	4.00	7.00
☐ 1981 Handbook of Agricultural Charts (1)	–	–	5.00	6.25
☐ National Food Review (4)	7.00	8.75	Not available	

Note: The agency will issue, periodically, ***ERS Research Abstracts,*** which provide descriptive information of current research reports and other publications and their prices. To be placed on the free mailing list for ***ERS Research Abstracts,*** and for additional details about ordering publications or on prices, please contact: EMS Information Division, Room 440-GHI, USDA, Washington, D.C. 20250. (202-447-4230 and 447-8590).

How to order: Check the title of each publication you wish to order and circle the price to indicate subscription or single copy. Calculate the total charges and enter below. Allow 6 weeks for processing. Foreign air mail information available from GPO.

Write check payable to: Superintendent of Documents

Enclosed is $ _____ ☐ check, ☐ money order, or charge to my Deposit Account No.

☐☐☐☐☐☐☐–☐

Order No._____

VISA® MasterCard

Credit Card Orders Only

Total charges $_____ **Fill in the boxes below.**

Credit Card No. ☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐

Expiration Date Month/Year ☐☐☐☐

Company or personal name

Additional address/attention line

Street address

City **State** **ZIP Code**

(or Country)

PLEASE PRINT OR TYPE

For Office Use Only	Quantity	Charges
Enclosed		
To be mailed		
Subscriptions		
Postage		
Foreign handling		
MMOB		
OPNR		
UPNS		
Discount		
Refund		

Mail this entire page to: Superintendent of Documents
U.S. Government Printing Office
Washington, D.C. 20402

UNITED STATES DEPARTMENT OF AGRICULTURE
WASHINGTON, D.C. 20250

OFFICIAL BUSINESS
PENALTY FOR PRIVATE USE, $300

To stop mailing ☐ or to change your address ☐ send this sheet with label intact, showing new address, to ERS Publications, Rm. 0054-South, USDA, Washington, D.C. 20250

POSTAGE ND FEES PAID
U.S. DEPARTMENT OF AGRICULTURE
AGR 101

FIRST CLASS

5306 KOSLMR300A112 18009 0001
M KOSLOWSKI C SA SPD UNIV
MICROFILMS INTER
300 N ZEEB RD
ANN ARBOR MI 48106